

THE CULTIVATOR.

THIRD

To Improve the Soil and the Mind.

SERIES

VOL. V.

ALBANY, JUNE, 1857.

No. VI.

Manures.

In the old and long settled sections of our country, much of the land has lost its natural fertility, and it is useless attempting to grow good crops of corn, grain, hay and other farm products, without the aid of a liberal supply of manure. On long cultivated soils, usually, the corn and succeeding crops are in proportion to the amount of manure applied to the land in the rotation of crops. Could every farmer have the requisite supply of manure, practically, there would be but little need of chemical and scientific knowledge in the usual routine of farming. But it is the almost universal deficiency of farm-yard manure, that has called forth so much scientific research, in seeking out and bringing to the notice of farmers various substitutes to supply the deficiency spoken of.

If farmers generally exercised the same economy in the care and management of the animal manures about their premises, that they do in many other things pertaining to their pecuniary interests, there would be less complaint about hard times and short crops than there now is. Somehow, perhaps frequently from want of due reflection, many farmers exhibit a culpable neglect in leaving the manure of their farm-stock exposed to the rains, snows, winds, &c., for months together, as though they thought a load of their water-leached trash was worth as much for manurial purposes as an equal amount or bulk of the rich deposits of a barn cellar. Such men do not seem to be aware that a valuable portion of manures can escape in the form of steam and gases generated by the heat and decomposition of vegetable and animal matters; or that another valuable part may be washed out by rain and snow water. The dark-colored drainage of barn-yards and dung-heaps, Prof. Voeckler assures us is more valuable than the urine of animals, because it contains phosphate of lime, which is scarcely to be found in the urine. The urine of a stock of cattle when properly cared for, is asserted by some good practical farmers to be worth as much as the solid excrements. A carefully conducted series of experiments for ten years, by Charles Alexander, near Peebles, Scotland, seems to fully substantiate the assertion. His statement is "that while fourteen head of cattle made six loads of solid manure, the urine voided by them in the same time would saturate seven

loads of loam, rendering it of equal value, load for load, with the solid excrements. He tried this experiment for ten years, and had indiscriminately used in the same field, either the rotted cow-dung, or the saturated earth; and in all the stages of the crop he had never been able to discover any perceptible difference; he found that his compost lasted in its effects as many years as his best putrescent manures."

The loam was deposited in a pit 36 feet square, 4 feet deep, surrounded by a cemented wall; the urine was conveyed from the hovel in water-tight gutters in rear of the cows and evenly spread over the loam. The cows were kept most of the time tied in the hovels; at the end of five months the loam was carted to the fields, as also the manure. The number of loads of loam, compared with the solid excrements was as 7 to 6,—or the loam in five months would manure seven acres, while the solid portion would only manure six acres, the number of loads per acre being the same. From the above, it appears, then, that in five months, each cow discharges urine which, when absorbed by loam, furnishes manure of the richest quality, and most durable effects, for half an acre of ground; and in addition to this the saturated loam is nearly or quite free of weed and grass seeds, which renders this kind of manure truly valuable for gardens, roots, and other hoed crops. For light or sandy soils, it might be better to make use of a clayey loam, or swamp muck, as an absorbent of the urine, rather than loam.

Said the late Mr. Colman, "conclusions of vast importance are deducible from these statements. They speak a volume of instruction; and if we are willing to learn, they must lead to a very material alteration in the construction of our barns." The remarks of Mr. C. were made many years ago, and it is an encouraging fact, that so many of our intelligent, thinking farmers have made "very material alterations in the construction of their barns," within the past twenty years, while at the same time, it is to be regretted that there are so many farmers that do not make any arrangements to save the liquid excrements of their cattle, either in summer or winter, and in some instances, a leaky floor is considered quite an essential requisite in a hovel. But every farmer should make it a leading object to guard against these losses. If

proper skill and economy were used in these matters, there would be less use for guano, superphosphates and other commercial manures, that are now so freely purchased by the tillers of the soil; and there would also be less cause for abandoning the culture of wheat in western New-York. The letter of Mr. Johnston, in the Co. Gent. of April 2nd settles that question pretty effectually.

The construction of a well built and convenient barn, with its well walled basement, or cellar, is all very commendable, and generally bespeaks the thrift and enterprize of its owners. With much satisfaction we have examined scores of them, but regret having too often found the owners of them sadly negligent in making the most of their means in the way of manure—that mainstay of successful farming.

We recently called upon a farmer who had, at much expense, built a large barn with a cellar under it. The cattle, some 16 or 18 head, have been kept tied in the hovel most of the time during the winter, perhaps turned out to drink twice a day. They had been allowed no bedding or litter; the manure was daily thrown through scuttle-holes in the floor. The green mortar-like manure could absorb none of the urine; of course it drained off, or soaked into the ground, and was lost. Had he provided swamp muck, saw-dust, or other absorbing materials, to have taken up the liquid portion of the excrements, the contents of the cellar would doubtless have been twice the value that they now are. The labor of collecting the materials would have been most richly repaid in the extra quantity and quality of the manure.

We called upon another farmer similarly situated as to his barn. He wished to make the most of his cellar, and heavily littered his floors with refuse hay, oats, straw, &c. The whole went into the cellar; but from the quantity of litter and urine, the whole mass heated badly, and much of it became fire-fanged and dry; the gases were driven off, and the whole contents of the cellar were much injured by the rapid fermentation. He consoled himself with the idea that his manure had not been leached by rain and snow water, and that it would be well rotted by the time he should cart it out for his corn crop. We suggested to him the probability of his suffering considerable loss in the escaping gases of the heating manure. He thought the gases were of no value; he didn't see how a plant could feed on air. He doubtless supposes, "the great scare-crow, the loss by the escape of ammonia by fermentation, is all gammon."

It seems to be a law of nature, that the death and decomposition of one generation of plants and animals, shall minister to the sustenance and growth of succeeding ones, and we may well suppose that all of the constituents of decaying plants will be required in building up new ones—and through the agency of plants animal life is sustained; precisely the same elements that make up the plant, also make up the animal, though these elements are combined in quite different proportions in the animal and the plant. But the fact is as clear as the unclouded noon-day sun, that the great bulk of all plants and animals, is made up of what were once (and will be again,) invisible gases; and these same gases combined, as they are when escaping from the heating manure, are as necessary to the production of a luxuriant growth of plants, as are the mineral ingredients that constitute the ash of the burned plant. Therefore it follows, that the farmer should as carefully save from waste the fleeting gases of his manure heaps, as he should those soluble salts that are so readily washed from them by the drenching rain-water.

In the heating manure heap, decomposition and re-composition of its organic matters takes place, resulting in the formation of many newly organized compounds; the most important of these is carbonate of ammonia, a valuable and also very volatile substance, liable to escape in large quantities from heating stable manure. Guano is considered valuable, in propor-

tion to the amount of ammonia it contains—or rather, the amount it will produce by fermentation.

In our next, we will give some account of the management of manure by another farmer.

Drill Seeding.

MESSERS. EDITORS—In your paper of March 19, *A Western Inquirer* asks, is a drill machine preferable to broadcast sowing? In reply, would say that I tried broadcast sowing by hand until I was heartily sick of it. First I could neither sow myself, nor hire one that did sow the seed evenly over the ground; then, in dragging it in, some of it would be covered too deep and some so shallow that the first rain would wash it out. Three years ago this spring, I came across a drill, (manufactured at Shortsville by H. L. & C. P. Brown,) the construction of which struck me as being exactly the thing farmers wanted, and which, for strength and durability, lightness of draught, evenness in the distribution of the seed, and its entire accuracy, together with the ease with which it could be altered to sow different quantities of seed per acre, I bought. And after the experience I have had with it, I could not be persuaded to return to the old method of sowing by hand again on any account.

My reasons for liking it are: For spring sowing, I can get my ground all nicely fitted for sowing before I take my seed to the field. Then I can arrange the drill to sow any particular quantity of seed per acre, and have it evenly distributed over the ground, no matter how hard the wind blows; and I can set the teeth of the machine so that it will cover the seed at very near the exact depth I wish, so that any rains that afterwards fall, instead of washing the seed out, wash it in, consequently it comes up evenly, and all has an even chance. I think I save at least 20 per cent. of the seed and get better crops. I think spring grain should not be covered as deep as wheat, as the ground is cold, and the nearer the surface the seed can be deposited and grow, the sooner it will start.

In sowing wheat also the depth can be regulated according to the state of the ground; if very dry, I cover it deeper than in a wet time, also, if the ground is liable to throw out the crop by frost, drilling in a great measure remedies it.

Of all the different kinds of Drills which I have seen I like the kind I have the best for its accuracy and adaptation for sowing all kinds of grain, and even for planting beans, where one has a small kind which will pass through the distributors, shutting off where you do not wish a row. I understand that the Patentees have recently added an attachment for sowing plaster, guano and grass seed; of its merits I could not speak. I think a Drill should be owned in every neighborhood, either by one person and let out to others, or where a friendly and accommodating spirit prevailed two or three could join and get one, and all enjoy its advantages. H. DABOLL. Canal, Onondaga Co.

Recipe to Make a Cracker Pie.

To a common-sized bake-tin 8 crackers, to be broken fine, one teaspoonful of Tartaric acid, 1 teacup of sugar, with water sufficient to wet the whole—say half a pint or a little more, with spice to suit the taste. The above I think equal to or better than an apple pie. You can make very good pies out of dry, light bread or biscuit, but it will take a little longer to soak it. I do not claim the above to be original, but I think it worth publishing. It may be new to some if not all. Bake the same as any pie. C. F. WEBSTER, Sen. Union Mills, Ia.

In re Superphosphate of Lime.

EDS. CULT. AND CO. GENT.—Being not only an advocate for well conducted and impartial experiments, but also about to embark in the manufacture of bone-dust and superphosphate of lime, I feel considerably jealous of any thing that detracts from the real value of either, (when made as they ought to be,) and I look upon the experiments made by M. Levesque (as they appear in your Jan. Cultivator,) as neither a fair trial of the relative value of the superphosphate as a manure for the potato, nor commented upon by him according to the merits of the case; for even by the figures as they stand in his table, the increase over that of the bare soil is greater in proportion to the expenditure of capital and labor, than any of the other manures tried. Yet he tells us that the superphosphate of lime "was but of slight service as a manure to the potato." He might as well give fine flour a bad name, because a small quantity of it made into a two cent cake, would not satisfy a man's appetite so well as one of a larger size made out of other material and costing five or six times as much. It is my opinion that in testing the value of food for the soil, it would be but right to follow the same principle, as far as practicable, that we do in relation to food for our family. We (who are poor) give the preference to that mode of supplying our wants, which will give us the most and best for a given amount of cash.

Had Mr. L. experimented so as to ascertain on what auxiliary manures the farmer should expend the few pounds or dollars he might have to devote to that object, I think we should have seen a very different summing up; but as he did not, and as I have given his results the attentive consideration he solicits, and have come to a different conclusion to his, I will, with your permission, spread his table of results again before your readers, altering his figures to dollars and bushels to the half acre, so as to make it plainer to the generality.

Table showing M. Levesque's experiment, with the number of bushels of potatoes gained for each dollar expended:—

PLOTS	Description of manure used.	Outlay in dollars.	Half acre increase in bush.	Number of bu. for each dol.
No. 2.	Superphosphate of lime,	5	33	6½
3.	Guano, S. Lime and Soot,	12	50	4
4.	Guano and Superphosphate,	16	85	5
5.	Guano and Vraie, (or sea weed,)	20	57	3
6.	Stable dung and Vraie,	27	70	3
7.	Guano,	24	106	4½
8.	Stable dung,	29	85	3
9.	do do	33	106	3½
10.	do do	42	190	4½

Table showing what might have been the result had each plot of ground had the same amount of capital or labor been expended on it—omitting the last three.

PLOTS	Description of manure used.	Outlay in dollars.	Half acre increase in bush.	Remarks.
2	Superphosphate,	15	99	Showing that
3	Guano, S. Lime and Soot,	15	60	\$15 spent in
4	Guano and Superphosphate,	15	75	superphos. is
5	Guano and Vraie,	15	45	more than e-
6	Stable dung and Vraie,	15	45	qual to 20 on
7	Guano,	15	67½	other man's.

Mr. L. says he intended "testing the value of certain hand manures as fertilizers in comparison with stable-dung." I intend that he failed to carry out this intention in his test of the value of superphosphate of lime for

potatoes. The quantity used in Plot No. 2, was evidently not sufficient to amount to a fair test—it was too much below the average quantity and cost of the manures put on the other plots. I think with such a reasonably low-priced manure he might have given a more liberal allowance, as he did in the case of guano put on Plot No. 7, or as he did in the experiment made with the Bullock turnip, where he used five cwt. of superphosphate of lime, and boasts of the immense crop. I wonder it never occurred to him that the potatoes might have proved as grateful for a liberal supply of lime as the turnips did. It would not be a very fair test of pig-feed, to give one pig out of a dozen a quart of corn-meal a day, and all the others their fill of oat-meal, peas and buckwheat, nor would the condition of the starved pig be any evidence against the value of corn-meal.

I trust you will not think I have taken up the cause of superphosphate altogether from selfish motives, for I firmly believe that if made as it ought to be, and sold at a moderate price, it is one of the best auxiliary manures a farmer can spend his money on; and I think that in order to ensure a truthfully made article, each State Agricultural Society ought to have it made under its control and supervision, as will be the case here. It is my intention to try and ascertain by a fair experiment, what amount of superphosphate will be best to apply to potatoes and other roots, and will give your readers the results.

Many thanks to J. A. CRAVEN of Franklin—I will try his remedy for the bark-louse. J. H. HODSON. Nova Scotia.

The Water Ram.

MESSRS. TUCKER & SON—I wish to convey water from a branch to my stable. Distance about four hundred yards. The elevation from the branch to the stable is, I suppose, between six and eight feet. Now I wish to know if a stream of water can be carried and raised the distance and height I have described, by a *hydraulic ram*. Will you or some of your experienced readers oblige a young farmer by giving him information on this point? Also the probable cost of ram and pipes. A TENNESSEE SUBSCRIBER.

For the successful operation of a water ram, there should be a flow of at least half a gallon of water per minute, or twelve hogsheads a day; and a descent of not less than a foot and a half for the driving pipe—which should in no case be smaller than an inchbore. The discharge pipe, through which the water ascends, should be at least half an inch bore. There will be no difficulty whatever in elevating the water to the height named by our correspondent, if the above named facilities exist, as nothing is more common than fifty or a hundred feet elevation, with only a few feet descent. There is no limit to the height, except in the strength of the pipes used—but the greater the fall in the driving pipe, and the larger the quantity of water used, the greater will be the quantity of water elevated by the ram. If there is but little water, and the descent is small, and the discharge pipe runs high, nearly all the force of the stream will be expended in raising the water, and only a very little will be driven up.

The greater the elevation to be overcome, compared with the descent in the drive-pipe, the longer the latter must be, so as to give a greater amount of momentum in its successive beats against the air-chamber.

We are informed that the Drain Tile Works, formerly carried on in this city by ARCHER & Co., have changed hands, and that the business will be hereafter conducted by the remaining partner, Mr. ALDERSON. He is a practical man, and we doubt not his work will give ample satisfaction.

Millet and Millet Fodder.

MESSRS. EDITORS—In answer to your correspondent who inquires how to make millet fodder, (hay,) I give you the following, which you can publish if you choose.

Ground for millet should be rich and mellow, and if new the better; that which will run and bake is totally unfit for it. It should be broken up and harrowed early in spring, and again before sowing the seed. Sow one bushel and a peck of seed per acre, and brush them in. Sow about ninety days before the usual time for the first frost in the fall; a light frost will not injure it. When the seed have pretty generally begun to ripen cut it, or before, if apprehensive of heavy frost. The mowing may be done with a machine or by hand. The hay should not be scattered, but should lie in swath four or five hours to wilt, or what is cut one day may lie till next if the weather is good. As soon as wilted, it may be put into small cocks, made as high as they will stand. I would prefer that it should be forked up by hand; the straw will be straighter, and will turn the rain-water better than if broken and tangled, as it will be by a horse-rake. But if the weather promises to remain good, the latter mode might be preferable. The hay by curing in cocks, will become wet with evaporation; but will not heat if the weather is cool. After three or four days, throw out the hay in the morning, so that the sun and air may dry it; in the evening cock it up again, putting three or four of the small cocks into one. In this condition let it remain a week or ten days, after which it may be stacked or housed.

Millet treated in this manner, will not assume a dead yellow color and become almost tasteless, as it does when cut, scattered and cured by the sun in midsummer, as is practiced by many persons; but will be really sweeter by having grown in the fall, and, by curing in the cock, its color, flavor and sweetness will be retained in a high degree. Managed in this way, I believe that millet will make as good hay as clover, timothy or herdsgrass, and will make a great deal more per acre than either of them.

Another of your correspondents inquires whether the Osage orange is poisonous. I can say that I have seen stock eat both the green leaves and the fruit, without apparent injury.

Now, sir, will you or some of your readers, advise me what description of mill I had best use (considering efficiency and economy,) to crush the Chinese sugar cane from about thirty acres of ground; also, where, and of whom it may be had, and what the price? B. D. SMITH. *Brentwood, Williamson Co., Tenn.*

Trapping the Rats.

MESSRS. EDS.—I notice in your last, inquiries in regard to poisoning rats, and having had some experience, I would like to say a few words to those who may be infested by the pesky things. Poisoning I once tried, and though successful, consider it rather a poor way of getting rid of them; for they proved a greater annoyance than when alive, as, when poisoned, they will crawl into some crevice to die, and, especially about the house, will in warm weather produce a result it is needless to describe. Add to this the danger of using poison, and I think the cure worse than the disease. A method which I have a number of times practiced, is to take a common steel trap lightly covered in a measure with meal, the chain attached to a spring pole, and the trap so arranged that when the rat pulls, the trap will be drawn up by the pole. Mr. Rat will then set up a squeal that will drive the balance from the premises; if the first victim does not give sufficient warning, the second or third will surely do it. A READER. *Castile, N. Y.*

Cows Sucking Themselves.

GENTS.—Inform me of some method through the Co. Gent., of preventing a cow from sucking herself. One of my neighbors has a very fine cow that is addicted to this habit. Yours, truly, P. B. CROWDER. *Amelia C. H., Va., Feb. 11th, 1857.*

We have had some little experience in this line, and have effectually prevented it by means of a "cow-collar." It is made in various ways, the essential requisite being to prevent the cow from bending her head about far enough to reach her milk—operating precisely as a *straight jacket*. The simplest is a frame, something like that of a common chair, with seat and back off, as represented in the cut, which also shows the manner of wearing it. (Fig. 1.) While this is on, the cow

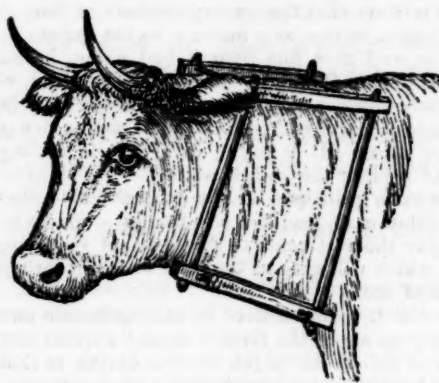


Fig. 1

cannot bend her neck more than half way round. But it looks rather convict-like, and we do not like to see animals in our herd so disfigured, and soon get rid of them. They may be easily fattened, with the collar on, but never thrive while they get milk, which spoils their appetite for more plebeian food.

We have lately seen a notice of a much simpler remedy, but have not had occasion to try it. It consists merely in thrusting a hickory stick through a slit in the nose, so that its ends shall project on each side horizontally a few inches, and prevent the cow from pushing her nose under her leg to reach her dugs. (Fig. 2.) The stick is about half an inch in diameter,



Fig. 2

(a) tapering to the ends for lightness, and with a smaller part at the middle, to prevent its slipping either way, and which causes it to retain its place permanently.

Winegar's Water Elevator.

Having had several inquiries for a mode of elevating water from deep wells, more particularly from the western states where deep wells are frequent, we are induced to give a description of Winegar's patent water elevator, illustrated with figures, which we have drawn from a machine whose usefulness has been well proved by long use. From our examination of different methods, we are inclined to think this decidedly the best of all the contrivances, either by pumps or buckets, which we have met with.

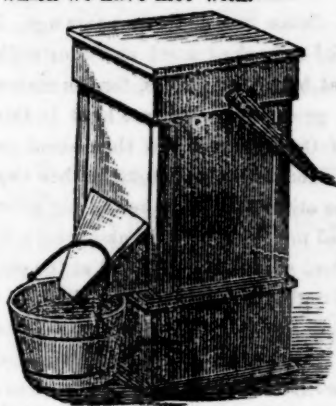


Fig. 1.

Fig. 1, shows an outside view of the elevator, entirely enclosed from view in a case; the water bucket emptying itself, no access to it, nor to any part of the interior, is at all needed. Hence it is as safe from any danger to young children, or animals, as a pump.

Fig. 2 exhibits the mode of elevating the water. Two stout wires, *a a*, descend to the bottom of the well, and are kept straight and in their places by a weight at the lower extremity of each. The bucket *b* is hung on a gate which slides up and down between these wires,

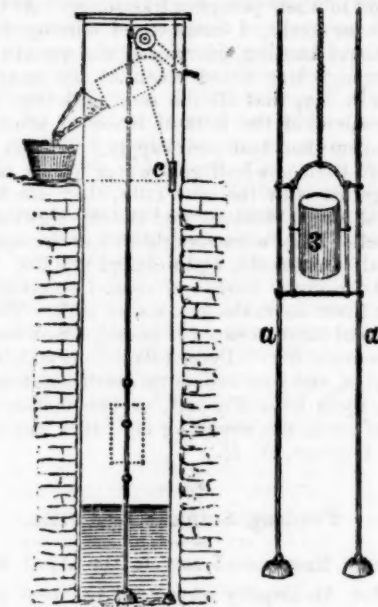


Fig. 3.

Fig. 2.

worked by a windlass or winch—and the bucket being hung on pivots a little above the middle, tips easily in filling with water, and again when discharging it at top. The great excellence of this invention is the smooth and uniform motion of this water bucket, in consequence of being held in its place by these wires, so that it never strikes the stone wall of the well, no matter how rapidly it may be worked: and the same wires keep the bucket exactly at the right place where the water is discharged, its inversion for this purpose being effected with mathematical precision.

Fig. 3, is another view of the same part edgewise,

representing by the dotted marks the bucket in the position of ascending from the water, and again at the top emptying its contents. A small weight, *c*, runs on a third wire, by means of a cord passing around the windlass, and counterpoises the weight of the bucket, preventing it from descending too rapidly.

In using this apparatus, all that is necessary is to turn a crank or winch, until the water-bucket reaches the top and discharges itself into the pail standing without; the hand is then removed from it, and the weight of the bucket quickly carries it down again. It never fails to dip full of water of its own accord, when down; and to discharge all its contents at the top. This bucket is of tin or galvanized iron.

We feel satisfied that our western correspondents, who are at a loss for a good mode of drawing water from deep wells, and who have asked for information, will find this just the thing they want. Its cheapness places it within the reach of every one, and the remarkable ease of its operation can be only understood by one who has tried it. The inventor is CALED WINEGAR, of Union Springs, N. Y., who is well known as the inventor of the celebrated automaton gate, and some other ingenious contrivances, and who will impart any desired information on the subject.

Brush Drains.

MESSRS. EDITORS—Mr. McNeill enquires in the Co. Gent. of 9th inst., respecting "brush drains." There can be no doubt but such drains, if properly constructed, may answer a good purpose. They act upon the same principle of the filter in the lye leach or vat. We think, however, that they would be more expensive than some other kinds of "filling in." To cut, draw, and pack the brush for even one hundred rods of under-drain, would be no trifling job. Tile drains are doubtless, the best and most efficient. Small stones properly packed, answer a very good purpose, but in the absence of tile and stone, we have at different times within the past fifteen years, made much use of small poles for filters in our drains—have used various kinds, such as hemlock, spruce, birch, maple, and recently, black alder poles; these last were from one to three inches in diameter at the stump, and from ten to twenty feet long. The drains were two and a half feet deep, and about ten inches wide at the bottom. Commence at the upper end of the ditch, lay in from four to six poles, according to size, and so on to the end of the ditch, lapping the poles, as directed in filling in brush. Have ready a supply of hemlock, cedar, or spruce boughs, and immediately cover the poles to prevent the soil from the sides of the ditch falling in and clogging. After the boughs are nicely shingled over the poles, step into the ditch, drawing in with a hoe a few inches of soil, treading it solid; working backwards, so as to press the covering firm upon the poles. The ditch can then be finally filled with the shovel or plow.

Drains thus made fifteen years ago, and at many times since, are this day running as freely as any tile or stone drain would discharge the water. A few years since, I drained a wet, flat, frost-heaving piece of land; before it was drained it was nearly worthless, now it will annually pay the net interest of more than \$100 per acre. It was sown with winter wheat 1st of last September. Early in February the snow disappeared; since which time the surface of the soil has been frozen and thawed more than twenty times, yet none of the wheat plants are thrown out or winter-killed, but the field is as green as when the snow came last November. Without drainage, we think wheat on this land could not have lived at all through such a severe trial. In thorough underdraining, there is much hard work and expense, but as far as our experience goes, it is a thing that will pay. L. B.

Farming in Litchfield County, Ct.

MESSRS. EDITORS—Your excellent papers are extensively circulated in this part of Connecticut, and thinking a brief account of the agricultural affairs of this section would be acceptable, I send you the following:

The soil of Litchfield county, especially the northern part, is a deep loam, resting upon a tenacious subsoil full of boulders, which are a serious impediment to the farmer. With such a soil the principal occupation of course must be dairying or raising cattle. The dairy products of this County have long been celebrated for their excellence. The dairymen keep from ten to forty or fifty cows each, and make the kind of cheese known in the markets of New-York, Baltimore, &c., as "English Dairy," which always commands a higher price than western cheese. Much of it is shipped to other markets south.

We choose our cows especially with reference to their milking properties, and this quality has been materially increased and developed by a careful selection for many years of calves from those cows which have been good milkers, a judicious manager seldom rearing a heifer from any others. The predominant breed is what we style the native, which some of your correspondents say is not a correct name. By the term "native," I mean a breed which is perhaps descended from the old Dutch or some other breed, but crossed with the Durham or some other, to such an extent as to lose the peculiarities and materially differ from either of the above breeds. The pure Durham does not endure our severe winters or flourish on our poor pastures, as well as the Ayrshire or the hardy Devon; at least such is the result of my observation.

Our cows yield of cheese, from 200 to 300 lbs. each per year, besides from 50 to 70 lbs. each of butter. This cheese sells to buyers here at 10 to 12½ cents per lb., and to consumers in New-York frequently as high as 20 cents per lb., making the amount received from each cow reckoning at the higher price (12½ cts.) and quantity mentioned above, for cheese \$37.50, and for butter estimated at 16½ cts. per lb., which is a very low estimate, \$11.66. Total amount received from each cow, \$49.16.

This result, doubtless, is a little above the average, yet instances are frequent where much greater results are obtained.

For working oxen, the Devons with us have long had the preference, combining the excellent qualities of strength and tractability, and also the readiness to adapt themselves to our rugged soil, which in many parts produces but indifferent pasturage; but even this breed our farmers choose to cross with some other for the sake of greater size. The skill employed by our farmers in rearing and training oxen, is now fully compensated by a demand for them which exceeds the supply.

We send many of our most valuable oxen to the towns lying east of the Hudson in New-York, adjoining our State. The present prices for working cattle may be a matter of interest to many of the readers of the Co. Gent.

The high price of beef has, for the last few years, kept oxen up to a point never dreamed of by a Connecticut farmer twenty years ago. A pair of oxen, five or six years old, of 3000 lbs. weight, properly trained and possessing good forms, readily sell for \$175 to \$200. A common pair cannot be bought for less than \$150.

This county has a number of public spirited, thorough-going farmers, who are devoting themselves and their capital toward developing the agricultural resources of the State, among whom I may mention the President of the Litchfield Co. Ag. Society, ROBBINS BATTELL, Esq., of Norfolk, who is particularly directing his cultivated taste and ample means to the im-

provement of the breed of horses of the County and State.

The late LEMUEL HURLBUT of Winchester, it will be remembered, was an early importer of the Devon breed of cattle into the county, and the first into New-England, and during the thirty-seven years he was engaged in the business, raised and sold over fifteen hundred head of Devons.

I may in future write for the Co. Gent. some of the results of different branches of Litchfield county farming. L. A. COOKE. *Colebrook, Ct.*

Fattening Pigs.

MESSRS. EDITORS—Some two or three years ago, I had a pig that was fed on cooked meal and sour milk until I was laughed at by my neighbors, for the reason that the pig did not grow any. He was kept in this way until the first of October, and was then about as large as your arm. Knowing that I must either buy my pork or plan some other way to make the pig grow fat, I changed his feed to cold sour milk and meal; in less than a week he had gained rapidly, and at the end of two months was slaughtered and weighed 261 lbs.

Last spring I bought two pigs, four weeks old, the 19th of May, for \$6. They were taken home and fed on sour milk for two or three weeks, giving them no more than they could eat up from one feeding to the next, always sweeping out the trough at every feeding. In this way they will eat a little at a time, and as often as it is desired; and will be straight and handsome, compared to the pigs that we formerly raised, which were fed on new milk five or six times a day, and nine times out of ten would roll one way just as well as another, on account of their pumpkin like shape. At the end of two or three weeks, I commenced stirring in a little meal without heating, increasing the quantity as long as the trough was found clean at the next feeding. Here I will say, that all the sour milk they had, was what remained of the milk of two cows after a family of six persons had had their supply. Late in the fall I used more than one half cold water to mix their meal in. Together with the sour milk, they ate five or six bushels of small potatoes, and twenty-eight bushels of corn-meal. They were slaughtered at the age of seven and a half months old, and weighed 660 lbs. Thus you see, that for every bushel of corn, I received twenty-three and four-sevenths pounds of pork. The smaller pig was sold for ten cents per pound, which would make both amount to \$66. Deduct six dollars which was paid for the pigs, and four dollars for small potatoes and sour milk, and you have \$56 left, or two dollars for every bushel of corn, not counting my labor anything. W. H. A. Warner, N. H.

Feeding Sulphur to Cattle.

MESSRS. EDITORS—I saw in the April No. of the Cultivator, an inquiry respecting the best manner to feed sulphur to cattle. I have been in the habit of feeding sulphur to cattle for twenty years. I mix one pound of sulphur with six quarts of salt, and place it in a box where the cattle can have free access to it. I have not seen a louse on my cattle since I commenced this practice. I think it has a tendency to make the old hair come off more readily.

The best time to feed it is in the fall or winter. If it is fed thus for two months in a year, I think no farmer will be troubled with lousy cattle. ASA BAILEY. *Burnt Hills, N. Y.*

Rotation in Crops.

The necessity for *some* rotation in crops, with the reasons which create that necessity, are familiar to all who think and inquire into the *why* and the *wherefore* of opinions, customs, and practices of whatever kinds. But though the necessity of *some* rotation is generally admitted, it is a question which it is difficult to decide correctly what that rotation should be, to secure the best results. It requires no little knowledge and the exercise of considerable good judgment to determine aright the system of rotation that shall be best for any particular district, farm or locality, for the decision demands acquaintance with the *general* principles of vegetable growth and culture, and also with the *particular* circumstances and considerations of climate, soil, seasons, markets, &c., &c. Many might reconsider the question,—“What system of rotation is the best for us?” every now and then with some prospect of advantage.

We have lately met with an account of the system of rotation adopted by an excellent farmer—an Ex-President of the Ag. Society of the State of Michigan—which contains so many good points as to make it quite suggestive and well worthy of attentive consideration. Those especially may study it with advantage or derive from it useful hints, who have not yet fixed upon any particular system of rotation, or may be willing to reconsider the subject when any new light seems to be thrown upon it, either from their own experience or from that of others. Mr. A. Y. MOORE, the gentleman referred to, has furnished an account of his system of rotation, by request of the Editor of the *Ohio Farmer*, for the columns of that paper, and from that communication we obtain the following particulars.

Mr. MOORE's home farm consists of 160 acres of prairie land, 20 acres of which are occupied by house, garden, orchard, lawns, barn-yard, and four small lots used for pasture, soiling, vegetables, &c. The balance of the farm—140 acres—is divided equally into seven 20-acre lots, which are farmed according to a system of rotation which embraces seven courses, thus: 1, Corn—2, Oats—3, Wheat—4, Clover—5, Wheat—6, Wheat—7, Clover. Each of the seven fields goes through this seven-year course in regular order, and is, in any particular year, at a stage in the course different from any and all of the others.

1st Year.—The rotation commences with a corn crop, for which a clover sod, well filled with seed, is plowed under, with the manure of the barn-yard. Mr. M. plows deeply for this crop, that the clover seed may not be disturbed in cultivating the corn, nor in getting in the next year's crop. This peculiarity of Mr. MOORE's management—burying his clover seed—deserves consideration.

2d Year.—Mr. M. plows early and *shallow* for oats, not yet disturbing the old sod. After the oats are harvested and the ground cleared, he plows *deeply* for wheat, bringing up to the surface the old sod with the clover seed, which, when sowed to wheat and well harrowed, will again seed the ground well to clover without the trouble of sowing any seed.

3d Year.—A crop of wheat and fall pasture.

4th Year.—A clover crop, which is pastured till July, when much of the seed is ripe, when again a clover sod is plowed under deeply, with the seed, and wheat sowed and well harrowed.

5th Year.—After the wheat is harvested, the stubble is plowed deeply to bring up the clover seed again, then harrowed, then sowed to wheat, and harrowed and rolled.

6th Year.—A crop of wheat and fall pasture.

7th Year.—A crop of clover for mowing, the land having been well seeded by the plowing process. Mr.

M. makes hay early, and reserves the second crop for seed. When ripe, he picks off the heads with a one-horse clover picker, enough being left on the ground to seed it as before.

8th Year.—Rotation commences, the same as the first, with corn.

By this system Mr. M. has yearly 60 acres of wheat, 20 acres of oats, 20 acres of clover for mowing, the same 20 acres for clover seed, and 20 acres for pasture. He has also the straw of 80 acres, and the corn-stalks of 20 more, for the winter feeding of his stock.

On the small lots near the house, Mr. M. raises drilled corn for fodder, and some millet for hay, these being favorite crops with him.

We do not present the above sketch of Mr. MOORE's judicious system of rotation and farm management, with any expectation that it should be exactly copied, but for the hints and suggestions which it furnishes. Mr. M. has tried other systems, and adopted this at last mainly because soil and climate were favorable for wheat, and because wheat was the most profitable crop.

One advantage of an established system of rotation, like this of Mr. M., is that one may know beforehand just how much help will be needed, how much teamwork will be required, and how much stock of the various kinds can be kept profitably. Some calculations may also be made of what the income should be from sales of grain and clover-seed; but the chief recommendation of this or a like system, according to Mr. M., is this: the owner may have the satisfaction of knowing that his land is constantly increasing in fertility.

Manures.

In our first article on manures, we gave some account of the method of the treatment of their manures by two different farmers. In this we will give a sketch of the management of another. His cattle in the hovels stand upon a raised platform, in the rear of which there is a water-tight gutter, four inches deep and twelve inches wide. It is closed at each end, so that the urine does not run off; but is mixed with litter, sawdust or muck, to absorb it, before clearing the hovels, which is done daily or oftener. In the hovel where oxen are kept, the length of the platform, from the stanchions to the gutter, is five feet; in the cow hovel, the platform is four feet seven inches. Some farmers object to tying cattle in slip stanchions; but when we have made use of bows, chains, or leather straps, we have found the cattle had too much lee-way, and were apt to lay back in their filth.

The barns of this farmer are so situated, that a cellar could not well be made under them. To remedy this as far as possible, the lower story of the smaller barn is made use of to store the manure. This is 20 by 30 feet, and ten feet high. The manure from the largest hovel, and from the horse stables, is thrown directly into the place of deposit; a wheelbarrow is used for removing the manure from the cow hovel. Through the winter season, straw, oats, &c., are used for littering the hovels. The mass, if not attended to, will soon heat as badly as horse manure; to prevent this, every few days the manure is evenly spread over the whole surface of the room, and the young cattle are allowed to tramp it, which prevents its heating. In the spring the manure is all carted on to his corn and other cultivated ground.

Through the summer from eight to ten head of cattle are tied up every night. The hovel doors are left open, and the barn otherwise well ventilated. Sawdust is wholly used for bedding through the summer, most of which is from oak and other hard-wood. Plaster of Paris is daily used on the hovel floors and in the gut-

ters. Two hogs are allowed to root and tramp over the manure, which keeps it from fire-fanging. Last year, from 1st of June till October, he made forty cartloads of first-rate manure; under his former management, in only yarding at night three or four cows, he would not have had over six loads, and that would have been weak, water leached trash. But under his present arrangement, he could and did have the means of manuring for winter wheat, which gave it growth and strength to stand the past trying winter, and the wheat has come through unharmed, while that of some other farmers is nearly destroyed.

We suppose good swamp muck or loam is worth more for mixing with the droppings of cattle than sawdust, but muck and loam are objectionable in the hovel, for as soon as they become wet, from their mortarlike consistency, they stick to the cattle and render them filthy, while the sawdust is cleanly and gives them a soft bed.

From the statements of Mr. Alexander, as noticed in our first article, we do not think any farmer would be likely to use sufficient sawdust to absorb all the urine of his cattle; therefore it would be good economy, as often as the manure is removed, to place a layer of loam or muck to the depth of eighteen or twenty-four inches over the cellar bottom. This would be likely to absorb most of the drainage.

There is much labor involved in tying up the cattle and clearing out the hovels the year round, but from our experience, we know of no way in which the farmer will receive a richer return for his labor, than in making the most of his manurial means, and this must be done in some way similar to the method we have named.

We think there is no way in which plaster can be so profitably used, as by strewing it daily in the hovels. In order to combine with the carbonate of ammonia, either the gypsum or the ammonia must be in solution. Dry plaster and volatile carbonate of ammonia will not combine and form the non-volatile sulphate of ammonia. But mixed with the droppings in the hovel, some portions of the plaster must necessarily dissolve, and when fermentation so far takes place as to generate carbonate of ammonia, a portion of it at least is in combination with the moisture of the heap, and then the right conditions are brought into play for the formation of sulphate of ammonia—a non-volatile state of ammonia. Besides this, the gypsum gives to the sawdust a black color, and hastens its decomposition; and it is a much easier way of spreading plaster over the land, as we cart it out with the manure, than sowing it by hand from a bucket. There are many farms upon which plaster exhibits no visible effects, but such lands, after being dunged with the gypsumed manure, we have known to become extremely favorable to clover—and where a good clover stand can be had, most other crops, and paying ones too, will follow, such as corn, potatoes, wheat and other grains, and grasses.

In the Co. Gent. of 26th of March, page 203, a correspondent, F. B., gives an account of his experiment in growing winter wheat. In the fall of 1853, he manured a part of his wheat field, and the other part left unmanured. The portion of the field manured yielded a fair crop; the unmanured part not worth harvesting, it being "winter-killed." He asks, "did the manure keep the ground from freezing so hard as to prevent the winter-killing, or did the manure give the young plants a healthy and robust root and constitution, so that they withstood the severe winter?" We think his last query is the true answer. Sheltering the manure, and saving all its parts and qualities, should be a leading object of farmers in the old and long settled portions of our country.

We shall continue the consideration of this subject in another article.

THE ROSE ACACIA grafted on the common locust makes a very pretty shrub. I grafted one last April, and it was in full bloom three times before September. R. F. BINGHAM. Ellsworth, O.

Preparation of Grapevine Borders.

For my Grape borders, I select free soil and free exposure. Trench 3 or 4 feet deep by 8 or 10 wide, with cobble stone at bottom for drainage, leading into a main ditch. In returning the excavated earth, I add, properly distributed, many articles, such as swamp or marsh muck, sand, turf, wood ashes, charcoal dust, gravel, black mould from the forest, *old compost manure*, dead carcass, broken bone, sulphur, cinders from the forge, burned clay, any old bits of harness, woollen carpet, old shoes, &c., with small stone of every shape, and not a few as large as can be drawn by Poney and stone-boat. The large stones are left a little exposed, which contract heat, and keep the borders warmer at night.

For trellis, insert posts, and nail strips of inch board. On such borders, I have a few Isabellas on trial. Last season I experimented with one Isabella, set in May, 1855, 3 years old; four do. set May, 1856, 4 years old, and one Concord in May, 1856, 4 years old. I applied to the borders through the season, liberally, soap-suds from the washing department. All these vines made vigorous growth. Had to keep a constant nipping and cutting of fingers and toes to keep them at home. The oldest Isabella was first in the perfection of its fruit. The 1856 Isabellas soon followed. The Concord, though transplanted from Mr. E. W. Bull's grounds, in Concord, Mass., the fore part of May, and materially backed by its transplanting, and did not burst its flowers until the oldest Isabella had made its fruit to the size of a squirrel-shot, overtook the former, and perfected its fruit in equal time. The fruit of both varieties was perfect in every point, and *black ripe*, and in good time. Not even a symptom of mildew was found with any of them, upon fruit or vine.

It is my opinion that the Concord Grape is a degree earlier than the Isabella, not so rampant in growth, not as *delicious* in its fruit, but about equal in size of bunch and berry, and more body for wine. The Concord has a thinner skin and stronger aroma. But after all, I am of the opinion that the "*Isabella*" can be *materially improved* in all *important points*, by *cultivation*. I am trying it. I am extending my grape experiments the present season, and *no abatement* in the "book, fancy and notion system." RURAL. Buffalo.

Milk Houses.

MESSRS. EDITORS—As the warm weather approaches, perhaps some remarks on milk houses may not be unacceptable to your readers. We have a small brick milk house, rough-cast on the outside, plastered within. It has three windows, and a ventilator in the roof. The trough on two sides is of Roman cement, and we have had water pumped in once or twice a day from an adjoining pump. The trough in hot weather had to be washed out every morning, the kettle of cream for churning placed in the ice-house or down the well, but with all our precautions good butter could not be obtained. A year ago it occurred to me to have it boarded on the outside, about a foot from the house, on the roof, and all the sides, excepting where the door is, leaving spaces for the windows. This may be done with rough boards, and the expense is trifling. A draught of air passing between the boarding and the wall, makes the house cool, and quite takes away the necessity of water in the trough, and through the hottest of the weather last summer our butter was sweet and good. In making a new milk house, it would be more convenient to have a broad shelf for the pans of milk. S. L. Montgomery Co., Md.

Experiments with Colza or Rape.

In the spring of 1854, I received from the Patent Office a good sized package of Rape seed. About the middle of June I sowed a few drills 15 rods in length, drills 27 inches apart—soil alluvial—previous year raised parsnips and carrots. The rape came up well, the plants greatly outgrowing Swedish turnips by the side of them, sown at the same time. At the first and second hoeing, the plants were thinned to 8 or 10 inches distant. In August, finding the plants too thick, commenced cutting every other plant, and fed them to my cows; but as there had been no rain for many weeks the leaves became so infested with lice, that I abandoned them to their fate. The drouth of that season and the lice destroyed nearly every plant before the frost came. My Swedes and cabbage fared but little better.

In June, 1855, heavily manured a plot of sward land. The manure was evenly spread, and turned under to the depth of six to eight inches deep; the inverted sod was pressed down with a heavy roller, then well harrowed lengthwise the furrows; with a kind of horse-rake drills were marked out; a sprinkling of De Burg's superphosphate was deposited in the drills; seed sown by hand, and covered by the use of a common hay rake. Several varieties of turnips, cabbages, kohi rabis, &c., were sown in the same way and at the same time—all of which produced heavy crops, much better than I have usually grown on old or thoroughly cultivated land. In July commenced thinning the rape plants, and fed them to my cows morning and evening, till the plants averaged about two feet each way. This brought it up to sixty-five days from the time the land was plowed. I then cut, at the surface of the ground, every other plant on an average plot. The lightest plant weighed three pounds four ounces; the heaviest, nine and a quarter pounds; the whole lot averaged a little over five and a half pounds per plant. There were fifty-six plants per square rod, but to be sure of not over-stating, I will call it fifty plants per square rod, and this would give twenty-two tons per acre of choice green food for cows, &c., in less than sixty-five days from the time the seed was sown. Had they been left to grow a month or two longer, there would doubtless have been some tons more; but I commenced cutting a large wheel-barrow full night and morning for my cows, till they were all used up, by which time I had a full supply of Early York Cabbage to succeed as green food for my cows. In course of a few weeks numerous sprouts sprang from the stumps of the rape plants, which gave at the rate of several tons per acre of second crop.

The season of 1855 was unusually wet, and rather cooler than our summers usually are—perhaps much resembling the climate of England, which is considered much more favorable to the turnip and cabbage tribe of plants than our usually hot and dry summers.

The past season I sowed rape seed on a well prepared soil. The plants did nearly as well as those of the previous season. I was several weeks in cutting the plants for feeding my cows—the stumps threw up numerous shoots, which were green and flourishing when the snow came last fall. The snow disappeared early in February, and the plants came out fresh and vigorous, and I thought they would stand the winter. About the first of March severe cold returned, and a few "freezings and thawings" has entirely killed them, root and branch. I left some twenty large plants near a wall, the snow drifted over and protected them; but it melted about the 20th of February, and the plants were as fresh and green as they were last fall, but freezing and thawing a few times has used them up entirely.

Several years since, at the suggestion of the Light House Board, a quantity of seed was imported, and

through the agency of the Patent Office the seed was widely distributed to various sections of the country. The object of the board was to test the practicability of growing the seed in this country for the purpose of manufacturing oil for illuminating purposes. The oil is of a superior quality for lamps. I am sorry to say, judging from my experiments, that the project of raising rape seed in the Northern States will entirely fail. The plant is a biennial, and will not survive our northern winters. For raising seed to any extent, it can only be grown in latitudes where the cabbage and turnip will endure the winter without protection. When the plant is cultivated for its seed, it is usually sown in August, and blossoms and perfects its seed in the following summer.

In a late No. of the *Irish Farmer's Gazette*, a subscriber asks, "If I sow genuine rape seed in May or June, can I have a crop of seed in harvest? Is there any such thing as genuine spring rape, if sown in May or June, that will go to seed in harvest?" Answer: "There is no such thing known as spring rape, that is, rape sown in spring producing seed the same season. By chance, rape sown very thickly in very poor ground may run to seed the same season, but will scarcely ripen well."

The growing of rape seed to any great extent in the Northern States I think is out of the question, but farmers that wish to grow it for green food for their cows, may sow the seed in August; late in the fall store some dozen or twenty plants in the cellar, and set them out in the spring, and thus could readily raise seed from year to year. My experiments with this plant for the past two years, have resulted so favorably, that I shall continue to grow them more extensively than heretofore, and shall sow a portion of the seed some two months earlier than I usually have. Perhaps the rape plant is neither "better or worse" for milch cows than cabbages, but it can be grown for feeding purposes in a very much shorter time than even the earliest cabbage.

With rape, cabbage, and the Chinese sugar cane, which can be had in regular succession from July till November, dairy farmers need not much fear autumnal drouths and short pastures. In January, 1856, you published some account of my experiments in growing the rape plant. From that till this time, I have had nearly fifty letters soliciting seed, and I am happy to say I have in every instance been able to furnish them, but am now out of seed and cannot furnish any more. I have received letters from about half the number of our States. From this I judge your paper has a wide range of circulation. L. BARTLETT. Warner, N. H.

Lice on Domestic Animals.

MESSRS. EDITORS—I notice in the current No. of the *Cultivator* a method of destroying lice on calves and colts, and although it may be an effectual one, I happen to know what will serve the same purpose, and be much more agreeable in application to those who do not like to use the "weed" in any form, viz., rub curriers' oil on the parts "inhabited," which will kill them all to the second generation. Lenoxville, Pa.

As you have published a number of remedies to expel these vermin, I will give you a very simple and effectual remedy. Take some low priced oil, put some Scotch snuff in it, and oil the animal along the backbone from head to tail, and also a streak around the neck an inch or two wide. Two or three applications will expel them. J. W. L.

Remedy for the Hoven.

Cattle pasturing on clover in a wet state, are apt to become bloated. I have relieved them in a short time, by simply placing a straw band in their mouth as a bit, and tying it over the head. In their endeavors to get it out the wind is expelled from the stomach.

J. W. L.

A Munich Horse Market.

MESSRS. TUCKER & SON—A great horse market has just taken place here, which has rather interested me. It is quite celebrated throughout Southern Germany, and annually calls together not only the buyers and sellers of Bavaria, but also many from the adjoining kingdom.

It commences on Ash Wednesday, at the conclusion of the Carnival, (this year Feb. 25,) and continues this and the two succeeding Wednesdays, of which three days, the first and last are the most attended. Great numbers of people are brought together, especially the peasants, and the opportunity is a good one for sales of other kinds of stock, and cattle and hogs are also brought in, although the affair is called a horse market.

It begins at 9 A. M., when the horses are brought on the ground and registered; at 11 it is at its height, and at 1 or 2 P. M. the ground is all cleared again. Yet in this short time an immense number of horses change owners.

The number on sale this year was about 2,000 the first day, 900 the second, and 1,200 the third, yet the display was by no means brilliant. The many peasants in their huge boots, and with coats and vests resplendent with huge buttons—others from other sections in blue blouses, often women in their gay costume were offering their animals for sale, whose merits they were eager to have you listen to, and here and there among them were a few grooms of noblemen in more brilliant livery. Yet there were but very few good carriage or saddle horses, in fact there appears to be little demand for such stock here.

But very few persons save the highest nobility keep a carriage of their own, and there is no "landed gentry" who pride themselves on their "pair," while the possession of riding horses is confined mostly to the officers in the army. The royal family have now pretty good horses, but they are bred at the royal stables, and do not come in market at such times to any considerable extent, and indeed in the royal and princely studs one finds many horses inferior to those found among farmers and private gentlemen in New-York and New-England. One would see as many good carriage horses in a single drove bought up in Western New-York or Vermont, for the New-York or Boston markets, as in this whole collection of 2,000 animals. The very few that were present attracted the more attention from their variety.

But there were great numbers, especially on the first day, of the heavy draft horses so generally used here for heavy work. Huge, clumsy animals, with sluggish motions, thick legs, made more thick in appearance by the long shaggy hair which I have never seen trimmed here. These horses are used not only for heavy teaming by brewers, &c., but also to some extent by the better class of farmers, and I noticed many of this class of animals changing owners. A large number were stallions.

On the second day of the fair, inferior animals, of no particular characteristics, were predominant, such as are used by the peasants and small land proprietors, by the poorer class of hack-drivers, &c. A most unpromising and unattractive set of animals; many of them decidedly mean, to be bought at cheap rates, but seeming dear at any price. The prices generally were considerably lower than in Western New-York. The sales were generally effected by the owners themselves; sometimes they have a peasant or groom to show the animal up, but there was but very little jockeying, and even the best horses seemed to have had but very little extra grooming to get them in form for the occasion. For the better class of animals, there are sometimes professional sellers employed to effect the sales, gener-

ally Jews, whose reputation for driving good bargains is perhaps well deserved.

There are certainly some advantages in such a fair, where buyers can see so large a choice of stock; yet I do not see the great advantages in the system that many do. It confines selling to particular times, it restricts the chances of sales at other seasons, and requires some trouble and expense at this, especially to those who live at a distance. The fair is not intended for choice stock; there is no especial display of good animals. But then, it is part of the great custom here of having fairs for the sale of every thing either little or great, and people would rather buy at such a time than at any other, whether there is any real gain or not.

The display of neat cattle was any thing but gratifying. They numbered from 400 to 800 on the different days, some days cows and others oxen predominating. They were decidedly and emphatically, the meanest set of cattle I ever saw together. I was told that the unusually hard winter that had just passed, had left the cattle poorer than usual, and for the credit of the Bavarian stock I hope this is true.

On one day, among over 400 cattle, nearly half oxen, I looked in vain for a single good yoke. Good cows were nearly as scarce, but as an average they were perhaps better than the oxen. The practice of working cows is not so general here as in Baden, nor are they as fine. Cattle here are universally stabled, and their condition at the fair told of the general scarcity of litter, for they were very dirty, or in many cases where the filth had been removed for the sake of the fair, it had been done at the expense of no little loss of hair.

Cattle do not appear to be grown for beef to any considerable extent. Only calves, or superannuated cows and oxen, find their way to the butchers' stall, except in rare cases. With the majority of people, to kill a steer or heifer, but two or three years old, for the flesh merely, would seem almost sinful.

I was so much occupied with the cows and horses each day, that I did not visit the hog department which was at some distance, but judging from the specimens that I saw on their way to and from the ground I think the display of *Berkshires* or *Suffolks* perhaps small. All that I saw belonged to the common breeds one sees in the country. The name "land-sharks" applied to similar animals in America seemed to me entirely inappropriate to these—on the contrary they seemed eminently adapted to the sea coast, although their position has precluded the idea of their having such an origin,—but I would call the attention of breeders in wet places as the flats of Long Island Sound to them: their length of legs would peculiarly well adapt them to wading on the flats at low tide, while the length of the snout would enable them to pick their living among the clams and shell fish at any depth below the surface of the mud.

The raising of hogs is not near as important an item in southern Germany as in America; the animals are generally inferior, and I think that but little attention is given to their improvement.

The fact is, the condition of the stock, (including all kinds of useful domestic animals) of a country, is to a great extent the index of the condition of the people who raise it. And I am thoroughly convinced that all attempts to improve agriculture here will fail, where the first step neglects to improve the agriculturist himself.

A good system of tillage, fine animals of improved breeds, or any general interest in raising them will only be brought about by first raising the condition of those whose occupation it is to till the soil. So long as they occupy the social and political position that the peasants do here, a recognized lower class in society, from which it is very difficult to rise into the upper (?) classes, so long will they battle improvement, and their systems of tillage, and cattle, and general tastes partake of their condition. Labor itself must

be dignified before it can ever be directed with due intelligence, and it certainly is not here.

I may at another time speak of the effect of agricultural schools here, in the region where they are planted, but my present communication is already too long, as it is also for any notice of other agricultural and horticultural fairs I have visited in different places. Yours most truly, WM. H. BREWER. *Munich, March, 1857.*

Mice and Trees.

GENTLEMEN—In your valuable journal I noticed a card signed by yourselves, stating you would be glad to receive any information on agricultural topics which your numerous readers could furnish; I therefore furnish you with the following information, which I deem of the utmost importance to all fruit-growers, as it has proved a certain preventive against the attacks of the field mice on our favorite fruit trees. Last winter I lost a great number of pear and apple trees by being barked by the above animals; I also had some apple trees, ten years of age, so barked. Most of the large trees I saved by applying a mixture of white lead, sand and a little oil mixed together to the consistence of paste, and then applied to the wounded part; it formed an artificial bark, and allowed the current of sap to flow up and down. Last fall I dug around my trees, and spread slacked lime on the upturned soil, and this winter trod down the snow well, after every fall, around them; I have not lost any so treated. But now to the certain preventive suggested by a neighbor of mine—it is the following: Purchase a box of roofing tin, which will cost about twelve dollars, and contains two hundred and fifty sheets, cut each sheet crosswise, hammer the two edges down on opposite sides, bend the tin around your trees and join the two bent edges together; they will protect the trunks fourteen inches above the ground, as the sheets are usually eighteen inches long and fourteen inches wide, and they would leave room enough for the trees to grow larger for many years; and if they are painted previous to placing around the trunks, they then can remain around them all the year, as they cannot rust, and will answer a double purpose—to save the trunks from the mice in winter, and from almost as great a destroyer in summer, viz., the whiplashes on the plow of the cultivator, as almost every one well knows to their cost when they see the life-blood flowing out of many a wound on their idolized trees, and often causing their total destruction. The gentleman above mentioned, saved all his trees so protected with tin this winter, whilst those not so sheathed were barked a foot or more beneath the snow. Horse manure will also answer to keep the mice away from trees, but the tin plan is the best.

A person having his trees encased as described, can sit by his fireside in winter with his mind at ease, when he thinks that all his trees are perfectly safe from these vigilant enemies.

I also know of an excellent plan for keeping the names on fruit trees for years, without any danger of the letters being obliterated, and if you desire it, I will make it the subject of another letter. Hoping the above may prove useful to many of your subscribers, I remain, yours truly, T. S. CLARKSON. *Clermont, N. Y.*

* * We shall be pleased to hear further from Mr. C as he proposes. Eds.

Boiled Turkey.

Clean the turkey, wash it well, season the inside with pepper and salt; dredge a little flour over, and pin it in a clean towel; put it into a kettle of hot water that has been salted; let it boil slowly; when done, send it to table hot. This is eaten with oyster sauce, or drawn butter, as preferred.—*Mrs. Widdifield.*

The Cherry Slug.

You would oblige a subscriber, by publishing in the COUNTRY GENTLEMAN, a remedy for the worms or grubs on cherry or pear trees, feeding on the leaves, but mostly on sweet cherry trees, eating the pulp out of the leaf, and leaving the frame of the leaf. It is about half an inch long, and a sixteenth of one inch thick, of a dark green color; when full, lighter color; when empty, moves like a snail—the skin so moist that dust adheres to it—a little thickest at one end—makes no nest—spins no thread. Sometimes it destroys all the leaves on the tree. Its first appearance last year, was about the 15th of July. Some of the branches first attacked were killed. The grubs disappeared in three or four weeks—came again in two or three weeks—stripped cherry trees varying in size from one to four inches in diameter entirely of their leaves. E. S. E. *Cheektowaga, Erie Co., N. Y.*

This insect is an old acquaintance with many nurserymen and fruit-growers, and is most commonly known as the *cherry slug*. Dry ashes, or dry water-slaked lime in powder, dusted over these insects, destroys them—but an easier way is to take dry sand or dry powdered earth, and throw it violently against them during the heat of the day, and it quickly dislodges them; and when once down they do not get up again very easily.

Transplanting Evergreens.

I wish to give your numerous readers my rules for transplanting evergreens, for I think them as easily transplanted as the apple tree. The time here is about the 15th of June, or after the tops have made from one to two inches new growth. First dig your holes for your trees—dig them large and deep—then take a stake six feet long and drive it down in the center of your hole two feet deep—then fill the hole with fine soil to within six inches of the top—then dig up your trees with as many roots as you can get, and set them out as soon as you can, filling around the roots with fine soil. After you have got the roots covered two inches deep pour in one pail of water—then wind some rags around the top of your stake, and tie the tree firmly to the stake, and keep it so tied for two years; and don't forget to cover the ground for two feet each way from your tree, with old hay or straw eight inches deep, and put on some stones to keep it from blowing away.

In this way I have set out Pine, Hemlock, Spruce, and Balsam Fir, without losing one tree. W. *Little Valley, N. Y.*

How to Destroy Caterpillars on Trees.

Having observed several methods of destroying the caterpillars that infest apple trees in the spring, such as rubbing them off, burning with shavings, cotton and turpentine, &c., I am induced to give you the simple and perfectly effectual method practiced here. Take common soft soap and thin it with water so that it will not slip off the brush, and a person may stand upon the ground and apply it to the nests with a common painter's brush, inserted in a hole bored through one end of a long strip sawed from a pine or other light board, and all that it touches it will instantly kill. If applied while the nests are small, very few will escape the first application. After the worms are larger, it is equally efficacious, but much more difficult to apply thoroughly.

Any thin oil or oil mixed with spirits of turpentine, is equally destructive to the worms, but the soap is less injurious to the trees. S. L. *Manchester, Ct.*

A Word about Post Holes.

For fencing, I dig post holes—the deeper, and more solid the earth, the better. But for my trees and shrubbery, I make no post holes. For all transplanting, I make spacious beds and borders. If the ground be a heavy subsoil, drain, and set my trees and shrubbery no lower than the surface soil. If I am about to transplant a large tree, say from ten to thirty years old, as I am doing occasionally, on my garden place, I go with my help and participate in the *rural luxury*. I make a wide excavation, much beyond the dimensions of the roots of the intended tree, and about two feet deep. Then subsoil with the spade, one spit deep. If a stiff clay, make a discharge drain, leading to the nearest under or open drain, or the tree will surely die. Then with my poney, I draw several loads of foreign materials, such as gravel, marsh muck, forest mould, *old compost manure*, small stone, old bones, turf, leached ashes, and sand, and compost with the excavated earth thrown out. Then fill in with the compost to about one foot of the top. Then I set my tree, and fill in around and over the mass of roots and soil attached to the roots, and continue to grade up about one foot above the natural level. Thus the tree has a deep, rich, warm bed for its future growth; an extensive, free range for its roots, and when settled, the surface around the tree will be at a proper crowning slope. The excavations for large trees should be made one year previous to being occupied by the tree, and left open.

In my own experiments I find no difficulty in success in transplanting trees of any size, if the work be done between the falling of the leaf in autumn, and the bursting of the bud in spring, providing *all the work* be done right. Of the two hundred trees transplanted on my garden place since the year 1852, ranging from 2, 3, 5, 10, to 25 years old when taken, I have lost but few of the large size. With the largest I have invariably been the most particular; with the small ones have been too much in a hurry, both at taking up and setting out. One thing I have learned in the business of transplanting—to get a life insurance upon every tree for transplanting. This is done by taking with the tree, great or small, all the roots, to a reasonable extent, from the trunk, *inviolable*, with a cautious thinning of the branches, and the right work at setting out in their rich, warm, spacious beds. It has been my observation for many years, that trees cut up, jerked up, or pulled up, to the loss of most of their roots, and then left exposed until quite dry, and then unmercifully bereft of their branches, to make both ends alike, and then stuck in a post hole, and the clay battered around them to the consistency of a brickbat, are dead in advance. RURAL. Buffalo.

One Advantage of Rotten Manure.

EDITORS OF CULT. & CO. GENT.—There is an evil spreading over the land which should be entirely done away with, and that is using fresh manure; for it is quite evident that among the hay, &c., fed out to cattle, a vast quantity of the seeds of noxious weeds, as Canada thistle and others as bad, go with the fresh manure, and then the land is filled with weeds, that are almost impossible to eradicate. Farmers will find it greatly to their advantage to pile up their manure drawn from their yards in the spring, and let it remain during the summer to ferment, and thus destroy the seeds, that would otherwise germinate, and if possible place it under cover, and pour all liquid manure on it. By doing so they will find their account in it. COLUMBIA CO.

Recipe for Rheumatism.

Lemon juice is relied on by the physicians of London for curing rheumatism. Three tablespoonfuls per day is a dose for a man. X.

Underdraining with Stone.

MESSRS. EDITORS—A writer in the Country Gentleman inquires if any one has experimented with under drains of round or "cobble" stones. I can give something of an answer.

Some four years since, an old countryman in my employ informed me that he could lay an effectual "pipe" of small stones laid regularly in three courses, one on each side and one on the "shoulders" of these, forming the top. The top course must be laid so as to wedge between the others, to keep them apart, and must be covered with turf, straw, or something to keep the earth from filling in, till an enduring crust is formed. We tried "taking up" a water vein, in a hill-side, running along nearly on a level, and forming numerous springs. There is a strata of quicksand, in, or at the bottom of which the stones were laid. The trench was dug from two to four feet deep, and no wider at the bottom than was necessary to receive the "pipe,"—say one foot. It was filled rather imperfectly, being on a steep bank where tilling could not be done. It was fully successful—intercepting all the springs, emptying them in a single and constant stream at the mouth of the drain, and continues as good as at first.

The amount of stones required in a drain of this kind is not large, and an experienced hand will lay 30 or 40 rods in a day.

In building a fence on the side of the garden we dug a trench some two and a half feet deep—set the posts on the bottom, and filled around them with loose stones to the top of the ground, then filled the spaces between with stones thrown in at random, mainly to the depth of a foot or more, and after covering with turf, filled up with dirt. This has been a good and useful piece of work, for, besides draining the land, it preserves the fence from the action of frost, and in a measure from decay. Some days after a light rain, and when all around is dry, this drain is seen discharging water, though dug in a ridge of the hardest clay soil.

It will avail little to express my faith in the utility or practicability of this, or any other mode of underdraining, so long as that faith is not followed by "works" more extended. It however, appears providential, that in a region almost destitute of stone, these little boulders should appear, so well dispersed, and at the same time so fitted to this important use—draining the soil they now encumber. However, I am of the opinion that if the manufacture of draining tiles was commenced, there would soon be a good demand for them, as being the most convenient and suitable. C. G. CALKINS. Ashtabula, O.

Hard Soap for Family Use.

Take two pounds of clear grease to one pound of rosin; make this into soft soap, and while it is boiling, to every ten gallons of soap add one gallon of salt. Boil one hour after adding the salt. When it is done boiling, the soap will be at the top and the ley at the bottom. Skim off the soap; keep it and gently stir it in a leaky vessel, so that the ley will all run out the same as buttermilk does out of butter; then work the soap as butter is worked, until it is as thick as hasty pudding; then set it away to cool. Turpentine or tar will answer instead of rosin, but are not so good. Any refuse salt is good enough, or old pickle.

Another: Omit the rosin, and make as above. When the soap is skimmed off, and the ley all drained out, add boiling water to the soap, three parts water to four of soap; stir well together, and continue to stir it gently as long as it is thin enough to settle level. E. W.

INQUIRY.—Will turnips, carrots, onions, or any of the root crops, do well on a green-sward turned deeply under, so as to leave a fine rich tilth on the surface, providing it is a quite rich sandy loam? J. W. B.

"Exhaustion of Soils."

In the Co. Gent. of 23d April, H. B. S. of Guilford Co., N. C., has a short article on the "Exhaustion of Soils," and asks "How can I collect materials from the woods, my tannery, &c." It is principally due to the long continued deposits and decomposition of woody, herbaceous, and vegetable matters, on our good new soils, that gives to them so much of their natural fertility. In our forests centuries have gone and come since first vegetation began to draw from the soil those mineral constituents so necessary in their organization, and also from that never-failing store-house the atmosphere, those organic matters, of which the structures of plants are so largely composed. These constituents of vegetation, when once organized in the plants or animal, seem to be more readily available, by their decomposition, as food for plants, than the raw or unorganized materials, such as the potash, sulphur, phosphorus of the rock, &c., and the nitrogen, oxygen, and carbon of the atmosphere.

It has been wisely ordered that "plants should grow naturally without cultivation, because the soil and the air always contain a certain quantity of the elements they require; and as they die in the spot where they grew, or are consumed by wild animals, these substances, sooner or later, find their way back to the soil," and thus its fertility is kept up, if not annually increased. "But when agriculture comes into operation, these conditions are changed; the crop is removed from the soil and consumed elsewhere, and though the air will still afford the elements which are derived from it as abundantly as ever, the next generation of plants must find in the soil a diminished supply of the substances it obtained from them. The necessary consequence is, that if the cultivation of plants be continued, the quantity of valuable available matters in the soil becomes less and less, until at length they are so much reduced as to be no longer sufficient to maintain the growth of plants, and the soil is then said to be exhausted."

Says our correspondent, "this has been the manner of cultivation in the southern states, I presume, since Sir Walter Raleigh's time." Unfortunately, this ruinous system of farming and cropping, year after year, without making adequate returns to the soil of those necessary properties removed in the crop, has by no means been confined wholly to the southern states. Large portions of all the "Old Thirteen" are in a similar predicament; hence the mania for emigration to the rich, virgin soils of the great west.

Every one at all conversant with farming operations, is aware that the application of barn-yard manure in liberal quantities will restore fertility to these exhausted soils. But few farmers and planters, compared with the many, who have scores and hundreds of acres of arable lands, can have the requisite supply for but a very few acres, and the various substitutes, guanos, superphosphates, tafeus, and poudrettes, &c., &c., are too limited in supply, and too dear in price to come into very general use—even if their use would add permanence to the fertility of the soil; a question that is not yet clearly established.

In our experience, we have found heavy dressings of the more bulky kinds of manure, such as a compost composed of one part manure to two of swamp muck, or the decaying leaves and mold from our wood lot, or even sawdust, and spent tan, much more durable and effective than the most highly concentrated ammoniacal and phosphated manures, applied in the usual homeopathic doses, and larger quantities would not only be wasteful, but probably injurious to the crop to which they were applied. For the greater permanency of the bulky manures, we think there are both scientific and common sense reasons, which we will attempt to

point out in the series on manures we have commenced, by which we not only hope to benefit H. B. S., but other tillers of the soil.

Sheep Feeding.

We published some weeks since, a letter from Mr. JOHNSTON, giving an account of his feeding 500 sheep the past winter, the great object and the principal profit derived from it, being the value of the manure thus made. This course of winter feeding of both cattle and sheep, Mr. J. has practiced for many years, and by the abundant supply of manure obtained, has been enabled to enrich every acre of his farm, and with the aid of underdraining, to bring it all to the highest state of productiveness. In most years he has found this system of winter feeding highly remunerating, to say nothing of the value of the manure—often realizing very high prices for his corn, oats and hay, when thus converted into beef and mutton.

We are pleased to be able to add an instance of very successful sheep feeding in our own county. Mr. JURIAN WINNE of Bethlehem, has practiced it more or less for three winters past, with very satisfactory results. He had about 300 sheep to dispose of this spring, 280 of which he purchased in Canada West in the fall. He fed them three months with corn, oats, carrots, oil-meal and hay, and calculates the cost at about \$3.50 per head. Two hundred and thirty of these sheep, estimated to average 165 lbs. each, he sold to Messrs. Woolford & Todd of this city, at \$12 per head, and the balance of the lot at \$7—prices which paid a very handsome profit on the feeding, over and beyond a very considerable amount of the most valuable manure.

Mr. W. has furnished us the weights of half a dozen of these sheep. When he commenced feeding, they averaged 177 lbs., and after being fed four days less than 3 months, an increase of 36 lbs. per head was shown, the average for each reaching 213. We have requested Mr. W. to furnish for our columns the full particulars of his management, and are sure they will be read with much interest. He had the precaution, instead of taking such sheep as he could pick up in his vicinity, to go some distance to obtain cross-breeds, more or less tinged with Leicester blood, and the best adapted, in his opinion, for mutton sheep.

In all this, as we have shown, there is little, if anything, dependant upon chance. In one or both of the two resources afforded by the meat and the manure, remuneration is certain. Well would it be for our farmers if more would acquire the secret of fertilizing their farms in this way, and, with the extreme high prices of meat in our cities for the past few years, and the likelihood of their continuing so for the future, there is little probability of their having to wait long for a return of the investment. It is easy at least to make an experimental beginning; and those who are so situated as to do this, will not be likely to regret the trial. We shall be glad to publish any further facts that may be in possession of our readers, tending to throw light upon the subject. There is wealth enough at the command of the farmer, if he only knows where and how to look for it.

SALE OF STOCK.—I have recently sold to Messrs. FANNING & ALLEN, agents of the Tennessee Live Stock Importing Co., a choice lot of South-Down sheep and Berkshire pigs—also a stud colt of the Messenger blood. I have also sold five South-Down ewes to J. P. FISHER of Kentucky, and one ram and five ewes to A. CLEMENT, Esq., for a gentleman in Penn. DANIEL B. HAIGHT. Dover Plains, N. Y.

Root Crops—Humbugs, &c.

MESSRS. EDITORS—I was allowed an opportunity two years since, of urging upon the readers of THE GENTLEMAN, the importance of Root Crops, as a means of renovating the soil. The idea was advanced that there was possibly no means in the reach of the farmer whereby so great a quantity of food per acre could be raised and converted into fertilizing matter, and then returned to the soil, as this; and that by a continuance of this course (with suitable rotation,) and judiciously saving and applying the manure thus made, land could be more rapidly improved than by any other system of cropping.

For the last two seasons I have continued this course, having averaged 2,000 bushels yearly of carrots and bagas, and shall most assuredly follow it so long as it meets with my expectations, and no longer.

The *modus operandi* has been so often described in the Gentleman, it would be superfluous in me to say anything on this; but some few facts regarding their culture may not come amiss. In the first place I do not think carrots should be put in too early—not till the earth is fully warm so that the seed will speedily germinate, and not allow the weeds to get the start too much. In most localities I should think the last week in May preferable, and for bagas the 10th to 15th June.

As regards the soil, cloversward of one year's growth I think the most desirable for bagas and possibly for carrots, though for the last named, land put to some hoed crop the previous year has usually been preferred. The past season I raised one-fourth of an acre of carrots on a piece of heavy clover, plowed under the first week in June, and think with less labor in weeding than on old land. The above piece yielded about 800 bushels per acre—a usual average with me. My best bagas went some 1,150 bushels per acre. On a manured three-fourths of an acre the past season, I took 29 full wagon loads—single box without any sideboards. I weighed several loads, and the average weight was 1,200 lbs. each load. On another piece of half an acre I took 18 loads.

But what I wish is not to publish my own doings, but to endeavor to incite others just to try (on a small scale at first,) and see if these things are true, or if it is really only another of the "agricultural humbugs," about which we see and read so much now-a-days.

And while on the subject of humbugs allow me just to caution my brother farmers, against giving up too large a space of their best land the present season to the culture of the Chinese Sugar Cane. Don't make up your minds that we are going to manufacture from it all our own molasses and sugar, besides having a residue left to winter our cattle on; but just wait one season, and see how your neighbors make out with it before venturing too deeply upon this untried speculation, and ever bear in mind the *Morus multicaulis*, Rohan potato, and other worthless articles which have been palmed off upon the unsuspecting farmer in former years.

PEOPLE'S COLLEGE.—The location of this college has been definitely fixed at Havana, the capital of Schuyler county, near the head of Seneca lake. At a recent meeting of the trustees, committees were appointed to locate the buildings, and to commence their erection as soon as shall be deemed advisable—to take temporary charge of the agricultural interests of the college, and make suitable disposition of the lands for the coming season—and to report a plan of study for the college, and to designate persons to be employed as professors, officers and lecturers therefor, subject to the approval of the Board of Trustees at the annual meeting in August next.

The Wheat Crop.

MESSRS. LUTHER TUCKER & SON—I was much pleased with Mr. John Johnston's article on the "Wheat in Western New-York—Prospects of the season—Higher Farming required—Underdraining, Feeding and Manuring," which appeared in the Co. Gent. on the 2d of April inst., and also was gratified with your remarks thereon. Mr. Johnston writes in a thorough practical style, which shows that he has had experience, and that he also possesses sound judgment; and I heartily concur in all that he says.

I am convinced that thorough underdraining, wherever needful, is the foundation of all good farming; and without draining on wet lands, we cannot expect to cultivate successfully. Draining not only frees the soil from superfluous moisture, but it also completely alters its mechanical texture, rendering it much more porous, open, and friable, so that the roots of cultivated plants can penetrate it with much greater facility in search of food. On drained land the manure which is applied is of much greater service to growing crops than on land that is wet; and besides this, the land is much easier cultivated, and can be plowed in a moist season, when land that is not drained would be too wet. I have known many instances in which the increased quantity in the two next succeeding crops has paid the entire cost of the underdraining. I believe that it is a great fallacy to imagine that it will be necessary to discontinue growing wheat, either in western New-York or any where else, on land adapted to its growth, and we may rest assured, under such circumstances, that when the land tires and fails to yield a crop as it formerly did, that this arises from mismanagement. My connection with agriculture for nearly half a century, has clearly proved, to my mind, that by fair cultivation and a judicious rotation of crops, embracing suitable changes from green and root crops to grain crops, there is no fear but the land will continue to produce satisfactory crops of wheat in due course. If we continue to grow one kind of crop too frequently on the same land, or for some years in succession, that land will inevitably become exhausted of some of its constituent elements; because the same species of plants are continually extracting from the soil the same material elements for their food, until at last there is not sufficient of those elements left to produce that kind of crop. Different species of plants, however, require different kinds of food, from the soil in which they grow; hence it is evident that by repeated changes excessive exhaustion will be avoided; so that with manuring and proper cultivation, the land may be kept continually in condition for growing satisfactory crops of wheat, as well as other remunerative farm crops.

Mr. Johnston's method of feeding cattle with oil cake and other matters, is deserving of imitation, because at the present prices of butchers' beef, it will be remunerating, and the rich quality of the manure produced by this kind of feeding, would lay the foundation for more substantial crops in future years. In order, however, to produce beef and mutton most profitably, the principal part of the feeding material ought to be produced on the farm where the cattle are to be fed; and this can only be accomplished by adopting a systematic rotation of crops that will enable the farmer to produce turnips, mangle wurtzels, potatoes, corn, linseed, or what else he may require for feeding purposes.

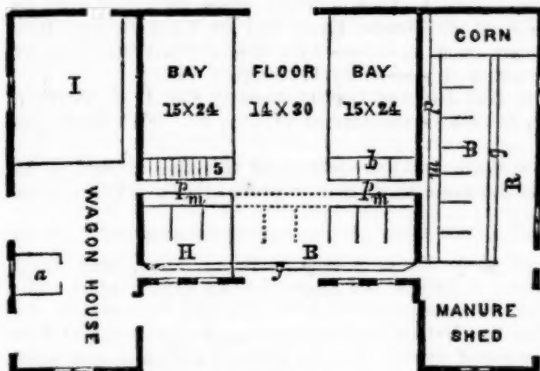
In conclusion, I would say, that if a judicious rotation of crops were adopted, and Mr. Johnston's advice and example estimated at their true value, there will soon be no need to think of discontinuing the wheat crop. T. THOMAS. Milwaukee, Wis.

A Barn for a Farm of 100 to 200 Acres.

[We commend the following plan to our readers, as combining many advantages and conveniences, for a barn of medium size, on one floor.]

MESSRS. TUCKER & SON—I herewith send you a plan of a barn which I have recently had erected, thinking it may afford a hint to some of your readers who may be building or remodelling.

Among the *sub-agents* which have contributed so much to our civilization—ever quietly at work, developing new ideas, originating new wants, and crowding individuals along by such a gentle pressure that they scarcely realize they are making any progress at all, the improvements in the art of building habitations for men and animals must be regarded as one of the most effective. These improvements have been general for only a few centuries, but it would be difficult to estimate the extent of their magic influence upon the mental and physical development of the race. I may say that the effect of comfortable habitations upon the lower orders of animals is quite as apparent as upon man, and it is seen, not only in early development and freedom from diseases, but in the milder nature of their dispositions, in their greater tractableness and the increased acuteness of their instincts. These are certain results; they are also positive advantages; and it would be a great gain to farmers if they would bestow more thought upon the arrangement and construction of farm-buildings.



B. Cattle stables 14 feet wide, with gutters and raised platform.

H. Horse stalls.

I. Sheep barn.

R. Raised platform, to be kept always clean.

p. Feeding passages.

b. Meal bins.

s. Cellar stairs.

a. Harness room—may be made larger if desired.

m. Mangers.

g. Gutters.

The doors and windows are readily distinguished.

The plan accompanying this, I have arranged with a special view to the saving of labor in attending to stock, storing and feeding out the harvests, comfort of the animals, and economy of construction. The main barn is 44 feet square; the additions are put up at the ends in the *lean-to* style, at a very great saving of means. I enter upon the floorway from the north, and usually back out, although when necessary I can drive through by removing the manger and stalls, which are in front of or across the floor-way, and which are so made as to be easily removed, and indeed, they may be kept out entirely during summer. If I desire to deposit grain or hay over the stable, I drive the forward end of the load up to the front of the stable and pitch off. But it is my purpose to keep this always clear to receive the straw from the threshing machine, to be used for bedding, &c, a place being

left open through which it may be put down behind the animals.

The manure is all wheeled into the manure shed, which is boarded and battened tightly to the roof, to prevent the gases (should any escape) from mingling with the hay in the lofts. Gutters are also sunk just behind the animals and the liquid portions are either carried directly on to the manure pile, or are soaked up by absorbents placed in the gutters for the purpose.

The latter is the better plan, I think. A slight inclination is given to the stable floors, but not too much, fearing injury to the posterior muscles of the legs.

It will be seen, that once within, all the animals may be fed without going out, except pigs and poultry, for which separate apartments are provided. Hay may be thrown from the mows and lofts directly into the feeding mangers. The cellar may be made either under the wagon house, or under the bay; mine is under the former and well lighted. In the portion marked I, there is no floor. If desirable, a shed may be run across the entire length of the barn, connecting the manure and wagon houses. At one end of the cattle stable in the addition, is a corn-crib, which is filled from without, and which has a small door from the feeding alley.

Hoping the above may furnish some useful hints to those of moderate means who desire a convenient barn, I am very truly yours, &c. CHAS. BETTS. Burr Oak, Mich. 1857.

Manures and Corn Culture.

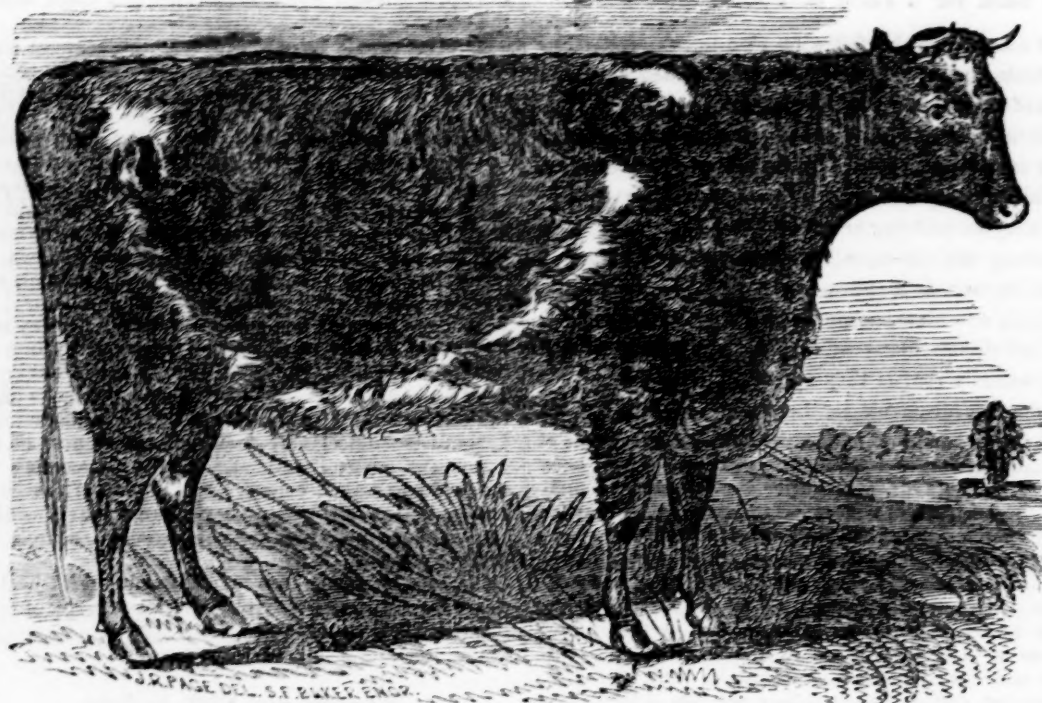
MESSRS. EDITORS—I have been a subscriber to "THE CULTIVATOR" ever since started by Judge BUEL. He altered my way of applying farm-yard manure. I used to let my winter manure lay over the summer—cart it out in the fall—put it in heaps for corn, to put in the hill the next year. I now apply all my manure in a green state. As there is much written at this day upon the application of manures, I will state how I apply mine. In the spring of 1853 I turned over a clover sod some six or seven inches deep, harrowed, furrowed three feet apart, deep, had a man draw out the manure green from the stable window—put a large shovelful in each hill. I followed with plaster, threw a little on each hill, covered it deep, stamped it down with both feet, and let it lie till ready to plant. Then I strewed six or seven kernels on each hill, and the man covered. This manure was from oxen fattened the previous winter on good hay and meal, without litter. The corn was thinned to four stalks in a hill and hoed three times.

In August of that year the Tolland Co. Ag. Society was formed. I was advised to enter an acre of corn for a premium. I got a surveyor, measured off an acre, and complied with the requirements—had eighty-three bushels and some quarts of shelled corn, and obtained the first premium.

I plant all my corn on green sward plowed in the spring—dunged in the hill with green dung without any preparation. As the sward and dung decompose they furnish heat and moisture to the young corn, just what it wants.

Two or three years ago I was plagued to get any plaster. I got enough for my potatoes and part of my corn; put it in the hill as above stated. Where I put the plaster the corn was of a better color, and larger all summer, and yielded better at harvest. My neighbors asked me what made the difference in my corn? I told them plaster. I said I would pay a dollar a bushel before I would plant without it.

In the spring when I split the hills, the dung where I put the plaster appeared to be all decomposed, and the strength all gone. The oats where there was no plaster, were a good deal the best, and so was the grass. I never have received any benefit from plaster only in connection with manure. If I apply it to corn I believe I get double pay, but at the expense of the next crop. NORMAN LITTLE. Columbia, Ct.



BRIGHT EYES V—Owned by C. K. Ward, Leroy, Genesee Co., N. Y.

PEDIGREE.—Red Roan, calved March 28, 1855. Bred by S. P. Chapman, Esq., Mount Pleasant Farm, Clockville, Madison Co., N. Y. Got by first prize Bull Halton, (11552.) Dam [Bright Eyes, 3d.] (imported by Messrs. Vail and Chapman in 1853,) by Earl Derby (10177)—g. d. [Bright Eyes, 2d] by Lord George Bentinck (1317)—gr. g. d. [Bright Eyes] by Conqueror, (2885)—gr. gr. g. d. — by a Son of Pearl, (65)—gr. gr. g. d. — by Mason's Son of Comet, (155)—gr. gr. gr. g. d. — by Wellington, (683.)

"Bright Eyes, 5th" is in calf to Mr. Chapman's first prize Bull Duke of Oxford, bred by Col. L. G. Morris of Fordham, N. Y., sired by the Duchess bull Duke of Gloster, (11392,) dam, Oxford 17, &c., &c. (We shall soon publish a cut of Duke of Oxford.)

Mr. Ward is becoming quite celebrated as a breeder of fine stock, and the addition of this fine animal to his herd (as well as the heifer "Fancy," purchased of Mr. C. at the same time) cannot prove otherwise than a great acquisition.

Feeding and Weaning Calves.

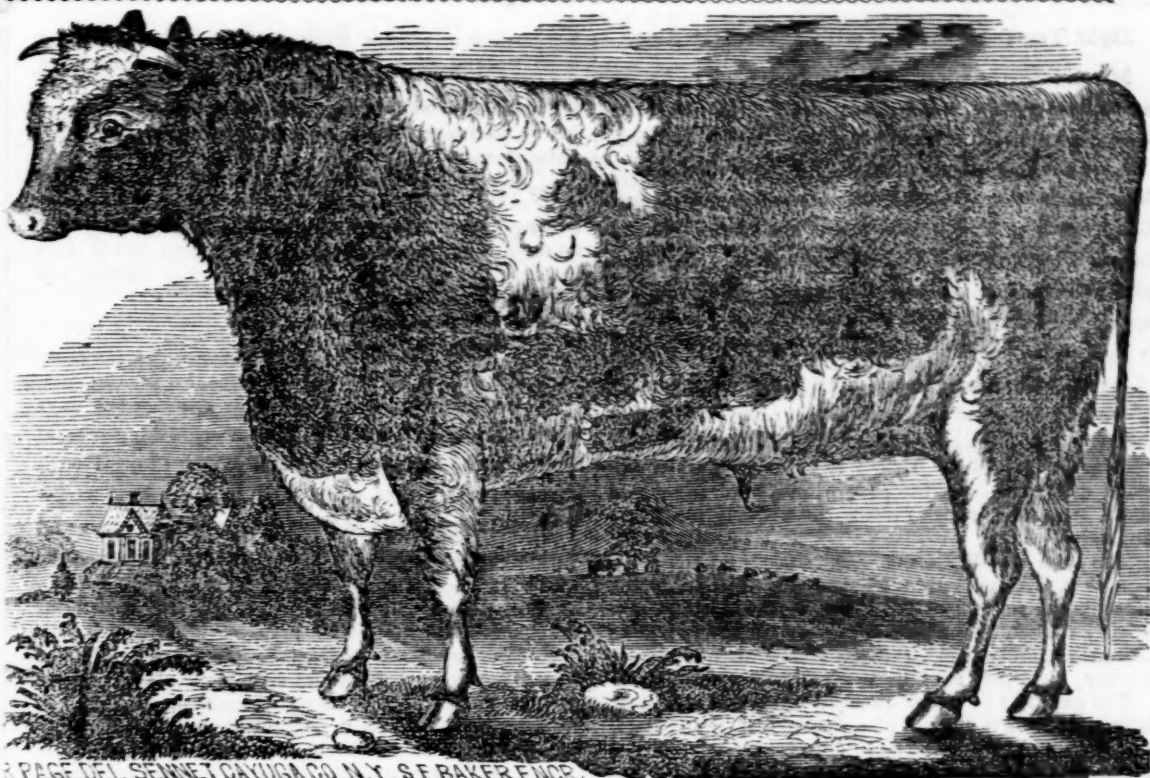
It is a practice with some, perhaps many, to feed calves, even at the earliest age, only twice a day. This has always appeared to us, not only as cruel, but as unnatural. It seems so utterly at variance with the manifest wants and instincts of the young of other animals, those of the human race included, and so opposed to the mode adopted by Nature in supplying food to lambs, foals, &c., as to convince us that it must be injurious as well as cruel and unnatural. We have no doubt that death and also diseases that may not terminate fatally, are often caused by the overloading of the stomach, which is the natural consequence of fasting too long. The practice of feeding very young calves only twice a day is too manifest an infraction of the instincts implanted by Nature, which lead the young of all animals to partake of the food provided for them, frequently and in small quantities, to be indulged in without pernicious and destructive consequences.

There are considerations of various kinds, therefore, calculated to influence persons of different dispositions and characters, and calling upon all for a reform in the feeding of very young calves. Those who care little or nothing about the discomfort of their calves, may be moved to this needed reform by the obvious danger of loss of property by their disease or death. The very least that should be done in the way of reform is to

feed *three times a day*, morning, noon, and night. When a calf is fed three times a day, a quart and a half to three quarts of new milk will be sufficient during the first two or three weeks at each meal, and the danger of overloading the stomach will thus be avoided.

The change from new milk to other kinds of food, should be made more gradually than is the practice with some. Sudden and violent changes are always dangerous, and not unfrequently productive of disease and even death. New milk should be allowed for three weeks at least. The danger from overloading the stomach or disordering the system is much greater with skimmed milk or other substances than with new milk. But this danger may be avoided by making the change in the food, from new milk to some substitute for it very gradual. The philosophy of this matter is well set forth by Mr. D. J. Browne, in the first article of the last Ag. Report from the Patent Office. It is therein shown to the eye by the aid of wood cuts, that the fourth stomach is much larger in a calf than all the other three, being the only one which is used while fed on milk. The others increase in size as more solid food is supplied, and are unprepared, all at once, to perform their proper functions. This, briefly stated, is one reason why a calf should not be suddenly changed from a diet of milk to one of more solid materials, as disease or an arrest of growth must necessarily follow.

Another reason why a change from new to skimmed milk should not be suddenly made is, that the latter has been deprived of nearly all its nutritive qualities. One who was very successful in weaning calves, fed them first with new milk, and then with skim-milk and meal, the latter supplying the nutritive matters abstracted by the butter and casein of the cream.



R. PAGE DEL. SENNET CAYUGA CO. N.Y. S.F. BAKER ENG.

SHORT-HORN BULL "DOUBLE DUKE,"

Bred by J. M. SHERWOOD, Esq., and owned by CHARLES P. WOOD, Auburn, N. Y. Dropped June 6th, 1855. Color, Roan. Got by 3d Duke of Cambridge, 5941—Dam, Red Rose 5th by 3d Duke of Cambridge, 5941—2d Dam, Red Rose 2d, by Napier, 6238—3d Dam, Tube Rose, by South Durham, 5281—4th Dam, Rose Ann, by Bellerophon, 3119—5th Dam, Rosette, by Belvidere, 1706—6th Dam, Red Rose, by Waterloo, 2816—7th Dam, Moss Rose, by Baron, 54—8th Dam, Angelina, by Phenomenon, 491—9th Dam, Anna Boleyn, by Favorite, 252—10th Dam, Princess, by Favorite, 252—11th Dam, Bright Eyes, by Favorite, 252—12th Dam, Bright Eyes, (bred by Alex. Hall,) by Hubbuck, 319—13th Dam, Bright Eyes, by Snowden Bull, 612—14th Dam, Beauty, (bred by Thomas Hall,) by Masterman Bull, 422—15th Dam, Duchess of Athol, by Harrison Bull, 292—16th Dam, Tripes, (bred by Mr. Pickering,) by Studley Bull, 626—17th Dam bred by Mr. Stephenson, of Kelton, in the year 1739

Wolf Teeth in Horses.

MESSRS. EDITORS—I have recently noticed an article in THE CULTIVATOR, on the subject of Wolf Teeth in Horses. I have had some experience in this matter, and here offer you the result of my observations. I had a valuable young horse who exhibited evidence of disease in one eye. My first impression was he had got some hay seed or something of the kind in his eye. The main symptom was running at the eye, and while affected in this way, he was unusually restless. I consulted with my neighbors, and was told that he had a wolf tooth, and unless removed it would make him blind; I then consulted several authors on the subject of horses, only one of whom mentioned this disease, and he mentioned it merely to ridicule the idea that a wolf tooth would affect the sight of the horse. I accordingly neglected to do anything about it until it was too late. I had it taken out at last, but the horse lost his eye. On another horse taken in the same manner, I had the tooth removed in season, when the running at the eye ceased, and the sight became perfect as before. These are facts that ought to be known, for our writers on the horse and his diseases, are either silent on this subject, or what is worse, only allude to it in such a manner as to lead us into error. A large proportion of the blindness among our horses is, in my opinion, owing to the presence of wolf teeth, which could have been removed with very little trouble, and the eye saved. I hope the readers of the Cultivator and the Country Gentleman will not have to learn so dear a

lesson on this subject as experience has taught me. A. M. WILLIAMS. *Fayetteville, N. Y.*

Productive Sheep.

MESSRS. EDITORS—In a recent number of the Co. Gent. I notice a communication from Mr. HOLMES, setting forth the good qualities of his Tartar or Chinese sheep. We have a kind (they can hardly be called a breed) known here as Natives. They are large, coarse wool, and very prolific.

One of my neighbors had, two years ago, a ewe that brought him two lambs. *Last spring* she had four; and one of the twins of the year previous had three, and the other two, making nine lambs from the three ewes, or eleven from the one ewe in two years. Can Mr. Holmes, or any other breeder, beat this? S. S. CLARKE. *West Alburgh, Vt., May 1st, 1857.*

Remedy for Sweney.

In the Rural American a correspondent says sweney in horses is not a complaint seated in the shoulder, but is caused by some disease elsewhere. From my experience I think otherwise. I have a horse which was lame, and getting lamer for upwards of two years, till it became unpleasant to drive him off of a walk. A secret mixture given me—(formed, I judge, principally of stimulating or irritating oils)—I had rubbed on the place daily, and omitted for two or three days when the part became tender, and lard rubbed on instead, to prevent the hair coming off; then the irritant renewed. In about three weeks the horse was cured, and is free from lameness. W. T. L.

Eight Years' Experience with the Water Ram.

MESSRS. LUTHER TUCKER & SON—I have had some experience with a *Water Ram*, and for the benefit of those who inquire, in regard to them I give it in detail.

I have a Ram manufactured by W. & B. Douglas of Middletown, Conn.; size, No. 4. It has been in operation more than eight years, and is one of the greatest labor-saving machines I have on the farm. The drive pipe is $1\frac{1}{2}$ inch calibre and 30 feet long. The height of spring from Ram is 2 10-12 feet. The discharge pipe is half an inch calibre, and about 18 rods long. Height of water discharged from Ram, 18 feet. The quantity of water discharged is 16 gallons per hour, or 384 gallons per day. I have a branch, so that I have it at both house and barn. By it I have watered seventeen cattle and two horses the past winter, and I presume there is enough runs to water three times the above number.

The Ram cost \$12 eight years since, and the drive pipe cost, I think, about \$4, and the discharge pipe 83 cents per rod. The expense of repairs for the eight years has been \$3.50, beside putting in new valves to the air-chamber two or three times, they being of leather. This does not require great skill or mechanism.

The quantity of water discharged by a *Water Ram* is in proportion to the fall of water from spring to Ram, and the height the water is to be raised. Therefore if my drive pipe had a fall of four feet to Ram, the quantity of water discharged would be much greater. On the other hand, if the height of water to be raised was twenty-seven feet, the quantity of water discharged would be much less. I think the quantity of water discharged by Ram is six or seven times greater than that from small pipe. The piston-rod can be adjusted so that the Ram will take more or less water; therefore it will operate through the driest seasons. JAS. CHILDS. *Deerfield, Mass.*

Management of Stable Manure.

EDITORS OF CO. GENTLEMAN—I have read with pleasure the several articles in your paper upon the subject of manures and their application; but none of them quite hit my case. I use all of my manure for raising corn, and apply it with reference to the present crop entirely—(as I have found by long experience that if I can get one *good* crop from a piece of land, another *good* crop is sure to follow)—therefore I put it all (or nearly so) in the hole.

Now what I want is some way to manufacture my stable manure into some substance which I can easily cart from one to three miles, and which, when put in the hill for corn, will give it an early start. I find no difficulty about my corn filling out if I can only get it started early. My plan has been this: I cart no manure from my barn-yard in the spring, but let it lie till fall. During summer I cart in at leisure times, Peat, Muck, Clay, Loam, Sod, earth, or any other substance easily obtained, to mix with the manure—yard my cows on it and dig over if necessary. In the fall (say Nov.) scrape all up clean, and cart outside the yard, and put it in a long pile, say 12 or 15 feet wide, 3 or 4 feet high, and as long as necessary.

I never throw any manure from my stables into the barn-yard, either summer or winter; but my barn is so built that all my manure made by horned cattle and horses, goes into my hog-pen, and lies there under cover till spring. I then draw it out, and put it on top of my pile of barn-yard manure, (which by the way is nearly all earth). I then dig over the whole and mix thoroughly. I also mix in my ashes and a

few bushels of plaster Paris; and the manure having been worked over by the hogs, will heat enough to warm the whole mass. After lying from first of April till planting time it is ready for use. But it is very heavy, and a great job to get it to its place, say two miles or more.

If any of your correspondents will inform me of some other way to make my corn start early without carting two or three tons of earth per acre, they will do me a great favor. I have tried guano, and it does wonders on sandy land, but it does not answer my purpose on cold heavy land. B. C.

Clover Seed Cleaner.

MESSRS. EDITORS—I received a letter a few days since from D. D. MANLY of Tennessee, asking several questions about Messrs. T. Church & Co.'s Clover Cleaner and raising clover seed, which he wished me to answer, either privately or through THE CULTIVATOR, and with your permission I will answer them through your paper, and hope that others who have more experience in raising seed, will take pleasure in giving what light they can on the subject.

1. How are those machines operated—by horse or water power? I use them with a two-horse power, and clean from four to seven bushels per day. I have cleaned eight bushels in one afternoon, after plowing with my team in the forenoon.

2. Are those machines likely to be worn out soon? If they are properly tended, they will last several years.

3. Is cleaning clover seed a difficult or an easy process? It is not difficult for a person that is acquainted with machinery—all that is necessary is to give the machines proper motion. It requires two hands to tend it—one to shovel in the chaff, and the other to rake it away and keep the chaff convenient for the one that shovels in. The cleaner the straw is raked out the less motion it requires to fit the seed for market. It is necessary to run it through a fanning mill by hand.

4. At what precise stage of the crop should operations be commenced? I don't know as I can answer this question more satisfactorily than to inform you how I manage to raise seed. I generally pasture my clover till about the tenth of June. The sooner it is fed down the better, as it will ripen more evenly. It generally pays to sow on plaster as soon as the stock is taken out. When ripe, (I let it stand till most of the heads turn brown,) I gather it into my barn, and thrash and clean at my leisure, or as circumstances may require.

5. What is your estimate of the amount of clover seed on an acre of good clover? About three bushels. JAMES HARROWAY. *Richmondville, Schoharie Co.*

Experiments with Potatoes.

EDS. CULT. AND CO. GENT.—Thinking you might feel a little interested in an experiment which I tried last summer, I take the liberty of sending you the result.

On the 27th of May I planted two rows of potatoes, 27 hills in each row, side by side, and gave neither the advantage of extra soil or culture.

I planted as follows:

72 potatoes in 24 hills, weighing 1 lb 10 oz
34 " " " " " 5 lbs. 5 oz.

Nov. 24th dug as follows:

From 72 potatoes, dug 368, weighing 48½ pounds.
From 24 potatoes, dug 502, weighing 68 pounds.

I tried this experiment to satisfy myself about the old saying, that "small potatoes are as good to plant as large ones," and it turned out just as I supposed it would, in favor of the large seed. H. H. GUILD. *Mil-ton, Conn.*

Agriculture and other Pursuits.

Some time ago we chanced to meet with the assertion—where we should have least expected it—in the Transactions of an Agricultural Society, that "Agricultural Editors, and Professors in the enjoyment of salaries, are almost the only men who think farming profitable." We quoted it with some brief comments, (p. 48, vol. ix, Co. GENT.) and it afterwards (p. 97) became the subject of a communication from a Vermont farmer, who gave the "facts and figures" to show its incorrectness. Subsequently a "Letter from an Octogenarian," and another from a correspondent in New-Jersey (p. 210) elicited further remarks on the same subject—the "profits of farming." We now have before us a second article from our New-Jersey friend, (J. W. L. ;) also one—the publication of which has been accidentally deferred—from J. N. BAGG of West Springfield, (Mass.) Mr. B., as it appears, was the author of the sentiment quoted above, and he is still inclined to support it. In remarking as briefly as possible upon some points in his reply which seem to demand it, our only desire is to place the subject on its *real* merits; perhaps our correspondent, if a little more conversant with the "salaries" and general "profits" of "Agricultural Editors," would find in them less inducement than he supposes to exaggerate or mistake the case.

The first paragraph of Mr. Bagg's communication is as follows:

"While I yield to no man in love of agricultural pursuits, and a *desire to make it profitable*, I cannot shut my eyes to the fact, *that it does not generally pay*. I know this doctrine is unpopular and contrary to our wishes, but this does not alter the fact. There is a great deal of *loose talk* now-a-days upon agriculture. We hear of farmers getting rich and tradesmen poor; of mammoth crops and monstrous prices, but little is said of the thousands of farmers who barely earn a livelihood for themselves and families, and of the sterile acres that reluctantly yield their meagre fruits. Probably seven-eighths of the agricultural reading of the present day is humbug, and will not stand the test of experiment. Is not this the reason why book-farming in some quarters is so loudly decried?"

Now our correspondent has most assuredly here, as well as in all his article, fallen into the very error he so much deprecates—that of "loose writing," a lack of "sound credible facts and figures," which characterizes, he says, "seven-eighths of our agricultural reading." The files of our papers for a quarter of a century, present cases which no reasonable man will doubt, to *prove* the "profits of agriculture;" we have recently appealed to the acquaintance of our readers with their own townspeople, whether Farming has not often been both the basis and the substance of comfortable fortunes, within their personal knowledge. We have before us—not only in several instances privately communicated testimony, but also the evidence of printed, well attested and unquestionable reports, to establish indisputably, *first*, that a farm *has been* often made to yield annual returns, equivalent in a course of years to moderate wealth, and *second*, that all that is necessary to educe such a result in the case of "thousands of farmers," is the exercise by them of similar intelligence, and the use of similar means. It is our part, and has always been the object of our papers, to place these facts before our readers everywhere—to define and circulate these means—to call into action the requisite intelligence. In doing this we have ever been actuated by a wholesome fear of "humbug," and fully sen-

sible that no cause can be permanently advanced by exaggerating its merits. And the "Agricultural reading of the present day," which without immodesty we may claim some share in eliciting from its authors, and in popularizing with its readers, is a large portion of it, made up of the actual experience of farmers and its results—we grant without much system, and sometimes based on striking errors of fact and judgment, but at the same time such as to lead those under whose eye it falls, to *think* of their own practice and improve it, first perhaps to question, but ere long to emulate the success of others. The majority of this "reading" is by no means that which has its source from the pens of "professors" or "agricultural editors." Treatises in book form constitute as yet but a small part of it—that which numbers its readers by tens of thousands comes from farmers themselves, by degrees is gaining credence with them, and leading them to act with more of the skill and forethought essential to success in every other pursuit, but which they have too generally regarded as wholly useless, or merely "humbug," in Agriculture. "Book-farming" is becoming an obsolete term—it may be slowly—but we can but fear far more slowly from such thoughtless aspersions as those of our correspondent. So far from its being an object to write in favor of the profits of agriculture, in order to be on the "popular" side, according to his showing this has been the unpopular side; for if the "meagre fruits reluctantly yielded by the sterile acres" of "seven-eighths" of our farmers only brought them a "bare livelihood"—if, as he says, the "mammoth crops and monstrous prices" of which we hear, are all "gammon," assertions to the contrary would lose at once every claim to credence, and be equally destitute of popularity and truth.

But even allowing the fact we do not now question, that with multitudes of farmers no more than a livelihood is the fruit of all their industry, we are still confronted with the other as well established fact, that *some* have been far more successful, and that without peculiar "luck" or any very extraordinary natural endowments. What they have done, there is an open path for others to accomplish as well, and while they have done it, it is a baseless insinuation that "every one knows no money can be made in farming."

But Mr. Bagg goes on to define a *Farmer* as "one who supports himself and family *solely* by the practice of Agriculture," and adds:

"A hybrid animal is not '*thorough-bred*;' a cattle importer, a Horse-jockey, a Distiller, a Tobacconist, or a Speculator, are not *full-blooded farmers*. I know men who combine other business with farming, and who thrive. The Clergyman, Lawyer, Doctor, Editor, Mechanic and Butcher, often do this. But I have yet to know a man, who, by the *single* practice of Agriculture, and the *simple* sale of the crops he raises, has paid for a farm, supported a family, and provided a competence for age. There may be such cases, but my experience among the fertile meadows of the Connecticut River, for a third of a century, does not suggest one."

We fear our correspondent will not be thanked by the farmers of the Connecticut Valley for speaking so confidently; they will say at once that his experience must be exceedingly limited or his memory very defective. The operations of the farm, in all its departments—the growth of grain and grass and roots, and their sale either in bulk, or after conversion into fat stock or dairy products; the breeding of domestic animals; the sale of fruits and kitchen vegetables, are all legitimately and purely branches of Agriculture. By a just combination of them, according to locality and circumstances; by such a system as shall maintain and improve the soil, those who see wheat quoted at from a dollar and a quarter to a dollar and a half per bushel, beef at 11 to 14 cts. a pound at wholesale, butter at from 25 to 30 cts., potatoes at \$3 to \$4 a barrel; apples and every other fruit that grows, at prices almost fabulous, will be hard to convince of the impossi-

bility of the farmer's laying the foundation of a competence. After accumulation is begun, careful investments will of course increase it, but that does not the less make it the fruit of good, honest agricultural labor. We are loth to believe there are no such instances within the knowledge of our friend. And so far from those being most successful who combine some other pursuit with that of agriculture, our experience leads us to a different impression, except in cases in which their time has been so little occupied with other occupations, that they have had the opportunity of bringing to Agriculture the habits of business application and thought, elsewhere learnt, and the necessity of which we are doing our utmost to impress upon farmers generally. A professional man who goes into farming as a *luxury*, is apt to find it a very expensive one; if he goes into it to *make money*, why shall not the far-do as much?

We defer until another time, some remarks upon the remainder of Mr. Baggs's communication.

Transportation Protector.

The inventor of this contrivance for the protection of packages while in course of transportation, Mr. HENRY B. OSGOOD of Whitinsville, Mass., has sent us a model, which may be seen at this office. A bouquet was enclosed to show the safety ensured by the suspension of the case by springs within a frame, as seen below, which reached us in excellent condition.

The following explanatory statement is from the pen of Mr. Osgood:—

My spring frame for packages, or Transportation Protector, for which letters Patent were granted to me on the 4th of Nov. last, is designed to protect fruits, and such things as are easily broken, or damaged by being bruised, during the process of transportation, storing and handling; and more effectually and easily than can be done by the ordinary means. In Fig. 1

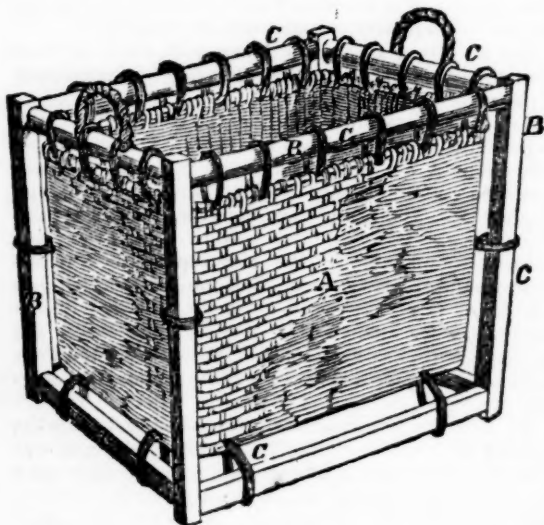


Fig. 1.

of the drawings, A is a basket, or may be a box, or any other suitable vessel or receptacle to contain the articles to be transported; B is the protector frame, and C, is the elastic fastenings by means of which the vessel A is combined with the frame B, so that in whatever position (when secured by a cover) they may be tumbled upon the ground, floor, or vehicle of conveyance, the vessel A, with its contents, is supported within the protector frame; the frame B being enough larger than A to project on all sides, so as to receive whatever shock or jar there may be; and the elastic

fastenings C prevent the shocks or jars being transmitted to the vessel A; these elastic fastenings may be rubber bands, or of any other convenient form or material.

The form which I suppose will be most convenient, is to have the vessel A cubical, or nearly so. If the load to be transported is very easily bruised, as straw-

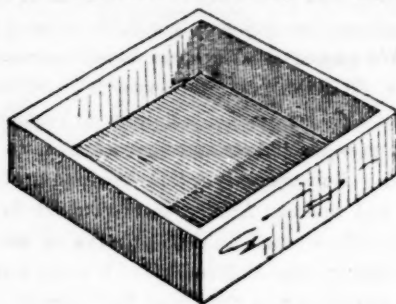


Fig. 2.

berries, raspberries, and the like,—where lower ones are liable to be crushed by the weight of those above—they should be put in shallow boxes, as shown in Fig. 2, which are made to fit into the cubical one, and which will hold several of them. These shallow boxes may be of 1, 2, 3, 4 quarts each, or any other convenient size. When the load to be used does not require the shallow boxes, the protector may be used without them. For bouquets and other light articles, I propose to make paper boxes, with bands of tape looped at suitable places to receive the elastic fastenings.

Melon Bugs.

Now that there is so small a prospect of a good supply of the more tender and delicate autumn fruits the present season, we would recommend our readers to lay in for an abundant crop of melons, wherever there is any kind of security from the depredations of those pests of society, fruit-thieves.

Many plant melons on good soil, but do not succeed on account of the melon bugs. There are various remedies, and success requires the prompt use of some of them. An old-fashioned, laborious, but sure way, is to examine the plants without omission two or three times a day, and destroy all the bugs that are found. Dusting with soot, guano, tobacco, snuff, ashes, lime, &c., have all been tried, with but partial success. Walls, of brick set on edge, have been made round each hill, and sometimes a pane of glass laid across the top, has been added; and if closely and carefully applied, these answer a good purpose, but they are liable to become quickly knocked out of place. Frames covered with gauze are also efficient, but the frames are not so easily made as are desirable, nor are they easily kept from year to year without injury. On the whole, we prefer the oil-cloth box, which has been used for some years, but may be unknown to most of our readers.

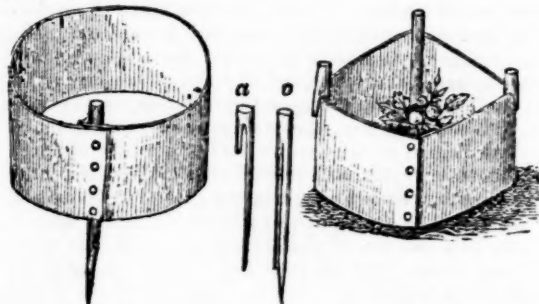


Fig. 1.

Fig. 2.

A piece of oil-cloth, (the stiffer the better,) is cut

into strips two or three feet long, and six or eight inches wide. Each piece is bent around in the form of a hoop, and the meeting ends or edges are fastened by carpet tacks to a sharp stick over a foot long, as shown in Fig. 1. For each of these, three additional sticks are provided, with a small fork like *a*, or a sawed slit like *b*. The box is then placed on the ground around each hill of melons, by thrusting the sharp stick into the earth, and then stretching it into a square form, as in Fig. 2, by means of the three additional sticks, which by the slit or fork hold it down to its place. By now drawing the earth up against the bottom of the oil-cloth, all entrance of bugs will be excluded, as none will pass in at the top.

As soon as the bug season is over, these boxes are folded flat, and laid away securely in a small space, for use another year.

Old oil-cloth carpets, or cast-off carriage curtains, may be used for this purpose, at little or no cost.

Condensed Correspondence.

OREGON.—Extract of a letter from a subscriber in Oregon, dated Oregon City, March 23, 1857:—"Our country is mostly a timbered one, consequently farming is not carried on on a large scale. Orcharding seems to suit the place and people better, and I think will pay better. I crossed the Plains in 1854—settled a new place—planted an orchard last spring, mostly yearlings—some few four years old. The present season I will have considerable fruit on my last year's planting, consisting of apples, pears, peaches, plums, cherries, currants, gooseberries, strawberries, pie plant, &c. I have given the different varieties to show what may be done. I had two yearling plum trees to bear and perfect their fruit, being transplanted also last spring. We train our orchards here on the "dwarf standard" system. Graft plum on peach stocks, most varieties succeeding well—all will succeed by double working. The health of Oregon in general, exceeds any country I have ever lived in. The past winter has been a very wet one, with three weeks of snow on the ground—snow eighteen inches deep in this valley. S. P. GILLILAND.

AMALGAMATION OF POTATOES.—"Hybridizing can be effected only by the impregnation of the blossom of one variety by the pollen of another." This is undoubtedly the case, and the return of the sap to the roots in forming the potatoes, after such impregnation, probably carried with it the spots which were found on the white potatoes. Herewith I forward to you another novelty—a sample of potatoes raised by me from seed-balls of the Mercer stock, supposed to be crossed with the blood beet; they are A No. 1, for eating, and will be shown at the next State Fair—red throughout, and slightly grained—*none for sale*. I have refused \$1 a piece for the entire lot, not wishing them to get into speculators' hands. D. L. HALSEY. *Victory, N. Y.*

TESTIMONY FROM THE SANDWICH ISLANDS ON THE CHESS QUESTION—SMUT—THE WEEVIL.—For the benefit of the believers in the transmutation of wheat into chess, I would say, that for some ten or twelve years after wheat began to be produced in this region, not a particle of chess was seen, the first seeds being pure, and no new seed being introduced in that time. Some five or six years since, oats from Australia were sowed, in which were chess. Afterwards the same ground was sowed to wheat, and the produce used for seed; since which time, there has been no lack of chess, of the tallest kind.

Do your know of any place where smut will run out, except by the use of means to get rid of it? I believe this to be such a place. Two years since some seed wheat was received from California, in which there was abundance of smut. The first year there might be one-tenth as much smut as was sown, the second year I have seen but one smut ball in hundreds of

bushels. I shall look with interest for the result of the coming crop.

Can you not give in the "Country Gent.," some information in regard to the weevil, (not *midge*, for that we are not troubled with,) its origin, habits, and a preventive to its depredations after wheat is threshed? We have not succeeded in keeping wheat here six months free from this pest. J. T. GOWER. *Makawao, East Maui, Sand. Islands.*

FINE FAT CATTLE.—Within a few weeks past, two pair of cattle have been brought to this market from the borders of the Connecticut. The first, were raised in Shelburne, near Greenfield, Franklin Co., they were reputed to be 6 or 7 years old. They weighed living, more than 5200 lbs.—the largest when dressed weighed 2054 lbs. These were strongly marked with the characteristics of the Durhams. They were slaughtered by Mr. J. Fairfield. Since then, a pair has been brought in from Deerfield, same County, that weighed alive 6000 lbs., and when dressed 4494 lbs. They were reputed to be 8 years old, and *genuine natives*,—slaughtered by Mr. Geo. Prescott, being superior beef, both pair. P. *South Danvers, April 25, 1857.*

A GENTLE HINT.—The editor of the Agricultural Department of the Oxford (Me.) Democrat is a great admirer of Professor Mapes, and has for years swallowed all his "hard sayings" with a delightful simplicity. It would seem, however, from his notice of the March no. of the Working Farmer, that his faith in the Professor's infallibility is beginning to waver. He says—"We would suggest to the Professor, whether the leading article in the Working Farmer for March is not rather strong in its tone, in claiming perfect freedom from error in all he has written. We think very highly of his honesty and intelligence in agriculture; but his claim of immaculate truth and absolute freedom from errors and mistakes, is rather tall feed for poor mortals. He must remember if such things have not been pointed out and proven on him, this is not sufficient proof that such a thing might not be done, or that he may not have fallen into such things. Nothing is ever gained to a cause or to the individual by claiming too much."

BUCKS COUNTY (PA) AG. SOCIETY.—The fourteenth annual meeting of the Bucks County Ag. Society was held at Pineville, on the 16th April, the President, WILLIAM STAVELY, in the chair.

The general business of the Society was transacted with great unanimity and good feeling. The Society is in quite a flourishing condition, and appointed a committee to procure a charter of incorporation. The receipts of the Society for the past year were \$1,309.61. The expenditures, principally for premiums, \$1,287.02, leaving a balance in the hands of the treasurer of \$22.59.

Among the committees appointed was one to attend the United States Agricultural Exhibition to be held in Louisville, Kentucky, in September next, consisting of the following persons: William Stavely, George W. Cunningham, W. T. Rogers, Adrian Cornell, Richard E. Ely.

The time for holding the next annual meeting was fixed for Wednesday, the 23d of September.

The following gentlemen constitute the board of officers for the ensuing year:

President—WM. STAVELY.

Vice-Presidents—Jacob H. Rogers, Hector C. Ivins, Robert Longshore, John Blacksan.

Rec. Sec.—John S. Brown.

Cor. Sec. Edmund G. Harrison.

Treasurer—Jacob Eastburn.

On motion, the thanks of the Society were tendered to the Commissioner of Patents for his attention in forwarding seeds, &c., to the Society.

If you starve your animals, they will be pretty sure to starve you.

Management of Chickens.

Our correspondent, C. C. of Coeymans, N. Y., furnishes a detailed description of a new coop for chickens, which we may briefly state is 4 feet long and 18 inches wide and high. One-third, at one end, has a board bottom, to preserve the chickens from the ill effects of roosting on damp ground—the rest is open to the ground. A partition with door separates the two apartments; and when in the floored part, the coop with chickens may be easily carried from one place to another. A coop quite similar to this, and in some respects superior, is described in the late edition of Bement's book on Poultry. We copy the following valuable suggestions from the communication of our correspondent.

I have found by experience that chickens roosting on the ground wet and cold nights, often contract the gapes, thereby sweeping off whole broods at a time. Old fowls must come to the ground and eat grass and pick worms, or they will grow poor, no matter how much grain they devour. Hence poultry raisers often wonder why hens, confined in coops with board bottoms (especially) and without bottoms, when they cannot be moved without letting out the hen and chickens, and are stuffed with the best Indian meal, grow poor.

With board bottoms the cause is this: they cannot thrive unless they can pick worms and grass, and consequently soon grow poor with no bottomed coops, the guano soon kills the grass, keeps the chickens dirty, makes them lousy, and in cold rains, being wet and nasty, they contract the gapes whereby many of them die. I might here add that gapes and lice kill more chickens than all other causes together, and should, therefore, be most securely guarded against. By shutting the partition door, the chickens may be moved without danger of killing them. If the roosting part is whitewashed inside, and cleaned once a week it will prevent lice; besides, the guano may be put in a proper receptacle and saved—quite an item to one who raises 100 chickens in a year. By moving the coop once a week, groundworms and fresh grass may be secured to the hen, and if the hen is poor at the time of hatching she will soon fat, and in six weeks or two months generally commence to lay; indeed, I have often had them commence laying in the coop whilst with the chickens.

Plaster a Remedy for Lice on Stock.

MESSRS. EDITORS—Much benefit may be derived by agriculturists or "Country Gentlemen," by changing and interchanging views of their knowledge gained by trials and experiments of minerals and chemicals as fertilizers, and other domestic uses. The fertilizing qualities of plaster or gypsum, are too well known when applied to corn and clover, in increasing their growth, to need comment. But when applied to corn just before it appears above ground, sown broadcast, it answers a double purpose of not only advancing the growth of the crop, but by preventing the mischievous crows from pulling the corn, for they always appear very suspicious of anything that smells like powder.

Plaster also as a remedy for lice on cattle or horses, is among the best I have ever known, used by applying it dry, rubbing it thoroughly in the hair of the animal. I purchased a colt at ten months old for \$20, which was afflicted with that kind of vermin; I made one application of plaster, and kept him from my other stock about two weeks, and found no more trouble or

difficulty with the insects. When the colt was three years old past, he brought me \$120.

In numerous cases it has been used to destroy this pest to beasts, and I have never known the necessity of a second application. ALLEN PALMER. *Five Corners, N. Y., April, 1857.*

Steaming Hay.

MESSRS. EDITORS—One of our correspondents in Goshen, Orange Co., who is in the milk business, asks us whether he would get more milk from the same amount of hay by cutting it up and steaming it, than to feed it out as he does now, dry. We wrote him we thought he would increase the amount by so doing one quarter. Will you have the goodness to reply through the Country Gentleman? This is a subject which would interest us. A. N. WOOD & Co. *Eaton, N. Y.*

We have no definite experimental knowledge on this subject, and hope those who have made trials, will give us the results. Steaming cannot, of course, increase or diminish the quantity of nutritive matter in hay, but it may render it more digestible, and consequently more valuable, in the same way that grinding and cooking corn, doubles its fattening qualities when fed to swine. On this subject we copy the following from the "Cyclopedia of Agriculture."

"The process of cooking renders much soluble that would otherwise be imperfectly digested. It removes in some cases what would otherwise be unwholesome; and it renders savory what would otherwise be distasteful. This is illustrated in the effect which it has on mouldy hay or dry straw. In neither case is any nutritiveness added to anything that may be innutritious; if the hay has had half its nutritiveness washed or spoiled out of it by bad harvesting, it will be but 50 per cent. of good hay after steaming, as it was before; the only advantage of steaming, but it is a great one, is, that by means of it this inferior hay is made savory, so that cattle which would not touch it, will now readily consume it. Without steaming, there may be really 50 per cent. of a good hay in it; but then, in effect, it is worthless, for the cattle will not eat it. After steaming, there may be only 50 per cent. of a good hay in it; but then, as the stock will now consume it, we are enabled to get 50 per cent. of a good hay out of it."

Remedy for Cows' Sucking Themselves.

MESSRS. EDITORS—I see in the Country Gentleman of the 23d of April, an inquiry for some preventive against cows sucking themselves, and your remedy as given in cuts Nos. 1 and 2. We will say to Mr. Crowder that if he will draw out the tongue of his cow and lay it on a board, and with a sharp knife split the end apart—say one and a quarter inches—he will have no more trouble on that score. It will trouble his cow a few days in eating, but will soon get well without injury.

Splitting the tongue prevents the power of suction, which alone is obtained by the end of the tongue closing around the teat. It is less expensive than your mode, and permanent. R. WILLIAMSON. *Gallatin, Tenn.*

THE COUNTRY GENTLEMAN is a welcome visitor each week; he has always something interesting and useful to communicate to us farmers, and he introduces us to your Farmers' Club, where we can hear what the farmers have to say from all parts of our country on various subjects. I value it higher than any paper I receive; I put a stitch in his back the first leisure moment, and see what he has to say, then lay him carefully by.

J. W. L.

Inquiries and Answers.

YOUNG TREES IN OLD ORCHARDS.—Please inform me through the columns of the Cultivator, whether young apple trees can be made to thrive well in an old orchard where the old trees have died out, and how it can best be done; whether any of your correspondents have tried it, and with what success, and oblige A SUBSCRIBER. [It is more difficult to make young trees do well in the vacancies of old orchards, than on new ground, for three reasons:—First, the remaining large trees shade them, and prevent a good growth. Secondly, they are not so apt to receive good cultivation in an old orchard. Thirdly, the land has to some extent been exhausted by the previous trees. But by selecting strong and rapidly growing varieties, as the Baldwin, Northern Spy, Sops of Wine, Autumn Strawberry, King, &c., and keeping the whole land well cultivated, they will do well in rather thin orchards. We have often seen the experiment performed, and the above are the results of observation.]

WOOD UNDERDRAINS.—How long will boards an inch or an inch and a quarter thick prove efficient in underdrains? We are just beginning to learn the benefits of underdraining. Stone is not to be had in sufficient quantities, neither can drain tile be procured, so we have to use wood. The plan adopted here, is to lay a rail on each side of the ditch and cover them with boards one or one and a fourth inches thick, and long enough to reach across the ditch and rest on the rails. The usual width of our ditches is 18 inches. R. S. W. *New Ross, Ind.* [Some kinds of wood will last at least ten or twenty times as long as others. If basswood should be used, it would be decayed in less than two years, while good red cedar would perhaps last a hundred. If our correspondent will select the most durable sorts of wood, such for instance as is commonly used for the best posts, the drain may be safely relied on for many years. In the lapse of years, the earth about the channel becomes so compact if of a rather clayey texture, and far removed from the character of quicksand, that the orifice will remain and discharge water, even after the decay of the wood has taken place, provided the orifice is not large and the quantity of water running is moderate or small.]

It would require a large volume, some months labor, and quite an expenditure for engraving, to answer properly and fully the thirty-one questions put to us by a subscriber at Leaksville, Miss., and as most of them relate to matters of science and philosophy, subjects not coming generally within the scope of our journal, we must beg him to look to some other source for information.

CAN YOU INFORM ME HOW THE MACHINE OF MESSRS. FAIRBANKS, WILMOT & CO., SUCCEEDS IN FELLING TREES AND CROSS-CUTTING TIMBER. Has it proved itself valuable in practice. WM. TODD. *Clark Co., Mo.* [We have received several inquiries of this kind, but are unable to answer them. Appearances were certainly much in favor of this machine during its operation at the Watertown State Fair. The manufacturers would find it to their interest to let the public hear from them on the subject.]

HERDS GRASS AND RED TOP.—I propose seeding down a few acres of low land, and desire to know how red top will succeed with herds grass, and how much of each kind should be used. F. RANDALL. *Oneida, April 15th, 1857.* [Herds grass (timothy) and red top, both grow with great success on moist mucky land, and doubtless the two together would do well, but we should like to know the actual experience of those who have tried it. The proper quantity would be about half of each sort separately.]

GUANO ON TOBACCO.—I wish to ascertain whether Peruvian Guano may be successfully used in the production of tobacco. Home-made manure is very diffi-

cult to obtain here. The soil is a warm gravelly loam. How much, and in what manner should the guano be applied? I wish to apply it liberally. If you will be so kind as to apply, either through the Country Gent., or by letter, you will oblige, O. A. BENTON *Leeds-ville, N. Y.*

ARTIFICIAL STONE HOUSES.—I saw in your April Cultivator, a piece—"How to build a Stone House." Your subscribers in this part are desirous of more information about this. They wish to know what kind of lime is used. We think that our stone lime will not do, such as we use to plaster houses. If it will or will not, please inform us. SEWELL WILMARTH. *Oakley, Pa.* [The common stone lime is used. The proportions of lime, sand, &c., were given in the article referred to.]

WARTS.—Is there any means whereby warts can be driven from the hand? They are not only troublesome, but in fact disgusting. J. C. L. [Tie a thread of sewing silk tightly around the base of the wart, so as nearly to cut into it—in two or three days it will loosen and come off, and a cure will be effected.]

WARTS.—Your last Co. Gent. has an inquiry for a cure for warts on horses or cattle. This is I believe a certain cure: If the wart is large, cut close; if small, no cutting is necessary. Then apply potash three or four times, at intervals of two or three days; this will cure either dry or bleeding warts, and unless they are it be very large, leave no scar. P. T. GRAVES. *Manack, Ala.*

POULTRY.—I have a kind of fowl, called by individuals the Downing. They are rather larger than the common kind; mostly speckled black and white, very easy to keep, and first rate layers. Have you any drawings of the Downing, and can you give a description of them. A. READER. [We know of no fowl under this name.]

DWARF PEARS.—Please inform me (1.) If the Bartlett and Seckel pears answer well on the quince? also Belle Lucrative. (2.) Would not autumn be the best season for putting out trees here which had been brought from the north? (3.) Will dwarf pear trees generally bear the third year from the bud? J. R. GARLICK. *Bruington, P. O., King and Queen Co., Va.* [The Bartlett and Seckel pears often do well on the quince, and sometimes very well. We have never seen finer dwarfs than some very thrifty pyramids of the Bartlett in full bearing. But these are exceptions—as a general rule, we would not recommend them worked in this way. The Bartlett usually bears quite young enough on its own roots, so that there is no reason for increasing this quality by dwarfing; and the Seckel is both small and an early bearer, worked as a standard, or as a pyramid on pear. The Belle Lucrative succeeds well as a dwarf for a few years, but after a while droops.]

Autumn would be the best time to procure trees from the north, and they might be set the same season, or laid in for spring setting.

Dwarf pears often bear the third year, but there is no certainty on this point. If sufficiently thrifty they usually do not.

The nursery firm at Rochester, named by our correspondent, is honorable and reliable.

EXHAUSTION OF SOILS.—The ruinous manner of cropping year after year, exhausting all the properties of the soil necessary to the growth and maturity of crops, will bring a farmer or a state to want. This has been the manner of cultivation in the southern states, I presume, since Sir Walter Raleigh's time. The farms or plantations are too large to reclaim in a few years. Mine is about a medium, 250 acres—75 or 80 in woods, the remainder cleared, in cultivation, and old fields. You see it is a bad chance to do justice to my land in cultivation, and undertake to im-

prove old fields, having but 12 acres in meadow; but I hope largely on advice and hints from your paper respecting manure. How can I collect materials from the woods, my tannery, &c., &c? H. B. S. Guilford, Co., N. C.

THE UPRIGHT QUINCE.—I have just obtained a small lot of quince stocks for dwarfing the pear on; most of them are the *Angers*, but the balance of my order is made up of what the nurserymen call Rochester uprights, said to have originated, or first brought into notice by Mr. Barry & Co., Rochester. They appear to be a vigorous growing variety, but I know nothing of their fitness for the purpose I want them. Will you be so kind as to give me some information respecting them, through the columns of the Co. Gent. W. FARE. [The upright quince is well known in some parts of France, and was introduced mixed with the *Angers*. It is not equal to the latter for pear stocks, although the great facility with which the cuttings strike root, render it of very easy propagation. We should much prefer the Paris or *Angers* stock, and would only use the upright for such vigorous sorts as the Angouleme and Louise Bonne of Jersey, budded below ground. Perhaps it should be only used for working the common quince upon.]

RAISING BEANS.—I wish to know through The Cultivator, the experience of practical farmers as to the result of raising the Navy bean, on wheat stubble after the wheat is taken off, and if that is too late, what is the best time to plant them, and what is the yield per acre. Is there another bean that is a little larger than the Navy bean that is as good? R. Carbondale, Ill.

ARTIFICIAL STONE.—Will you please inform me through the columns of the Co. Gent., of the manner of preparing concrete for the manufacture of artificial stone, and oblige one who heartily wishes "success to improvements." T. L. M. Surry Co., Va. [You will find the information asked for on page 131 of the current vol. of the Co. Gent.]

ARTIFICIAL STONE HOUSES.—Will our correspondent, J. E. S., answer the following queries, which we find in the Maine Farmer:

MR. EDITOR—I noticed a communication from the "Country Gentleman" upon artificial stone for building, in the Farmer, and having a superabundance of material recommended by him, I take the liberty of making a few inquiries.

1st. Will the stone possess sufficient strength for door and window caps?

2d. Will they answer for cellar wall?

3d. What size should the cylinder be in the block?

4th. Will boards answer for moulds?

5th. How manage in a story and a half house, to put in the upper floor timbers and roof?

6th. Will a mould less than a foot in width be sufficient for a small house?

7th. What sized stones will be best to mix in?

The lime, I presume, is to be measured before slaking. If the gentleman would answer the above, he will much oblige one who is seriously inclined to try the experiment.

TRESPASSES ON LANDS.—A. C. The law passed at the last session of the Legislature, entitled "An Act to punish nuisances and malicious trespasses on lands," is confined, in its application, to lots situated within the limits of "any incorporated city or village," and does not apply to farm lands.

BLINDS FOR HORSES.—In the Co. Gent. of Feb. 26th, I noticed an article headed "Relic of Barbarism," using blinds on the bridle of horses. Perhaps the writer is an experienced horseman, and can give other reasons why it is barbarous to use blinds. I was bred a horseman, and have driven horses in almost all ways, and can give a great many reasons why it is best to drive with blinds. A colt can be learnt to drive with

a bushel basket tied to his tail; still he might be frightened at a locomotive. Any horse that will drive well without blinds will drive well with, and a great many drive well with, that drive bad without. If you want your horse looking about the fields as you drive along the road, or going along with his neck half bent to see what is coming behind, and occasionally make a blunder and fall down, drive without blinds or check. As for your horse being less liable to frights and shearing, that is all a mistake. A. B., Jr. Bristol, Conn.

WASHING FLUID.—A writer says in your April No.—"If you think best, say in your paper that washing fluid containing spirits of turpentine should never be used." What is his reason for not using it? It may be all very well not to use it—but why not? Wm. McKinley. Huntley Grove, Ill.

MADDER.—Will any of your correspondents please to inform me through the columns of the Country Gentleman, the process of cultivating madder—also what kind of soil is most suitable for it—what is its value, and is there a ready market. The desired information will much oblige a young farmer. J. B.

Home-Made Seed Planter.

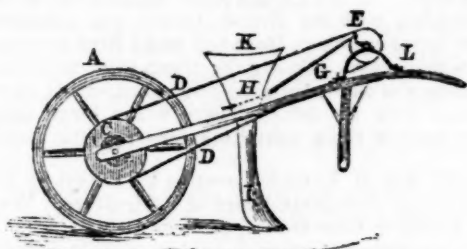
[We insert the following with the hope that it may be of use to those in remote localities, where good and well made seed planters are not offered for sale—although there appears to be a disadvantage in the operator drawing the machine behind him, and not seeing the work.]

MESSRS. EDITORS.—Seeing many inquiries in agricultural papers for seed planters, I give you a short description of one which may be cheaply and quickly made, and attached to a common wheel barrow, thereby avoiding unnecessary expense. The materials are two extra wheels—a leather band about five feet long, a short iron crank, several pieces of hoop iron, a piece for each different size of seeds.

Make a wooden wheel one foot in diameter and fasten on the axle of the wheel of the wheel barrow; then make a foot two feet long of hard wood, and with a match plane make a groove for the seed to pass into the ground; at the top of this construct a box of suitable size for the seed, and fasten it firmly on the wheel barrow, closely as possible to the main wheel, with foot pointing to the back end of the barrow. Then two and a half feet from the small wheel, the machinery must be fastened to move the iron distributor. This consists of quarter inch iron rod, with a small wooden wheel three inches in diameter, fastened on the same side as the wooden wheel attached to the barrow wheel, and the opposite end of the rod bent in the shape of a crank to move the distributor. Now take a piece of wood about two feet long, bore a hole suitable to admit the crank thus formed, and connect it with the distributor by sawing a slit in it, and boring a hole in it opposite the way in which it is sawed, and then make a hole in the end of the distributor to match the one in the piece of wood; then put a nail through these parts, thus connecting them, and the work is nearly finished.

A. is the barrow wheel. C. the wheel which is fastened to the axle of the barrow wheel and revolves with it, turning all the machinery, being one foot in diameter. D. D. the band connecting the machine wheel C. with the crank wheel E., which runs through the raised support L., and turning the crank which pushes the distributing rod to and fro in its revolutions, keeping the distributor H. passing through the box K., thereby letting the seeds fall through the holes made in the distributor, passing through the foot I. into the ground. Any person can place the holes at such distances as he wishes, or distribute the seed by having

a number of distributors with holes at different distances.



Carrots, turnips, broom corn, &c., may, by having suitable distributors, be planted with this. The operator must take hold like to a common barrow, and proceed backwards, keeping the foot I. in the ground at proper depth, and the wheel A. coming in the place of the foot I. will cover the seed and leave a smooth mark over the rows. Many seeds should have the ground packed over them in order to insure vegetation in time of drouth; among these beets, carrots and parsnips more especially. The facility and speed with which this machine plants, covers and packs the ground over the rows, is unsurpassed. To regulate the distance between the rows, and also to insure straight rows, the ground should be first marked, as follows: Take a piece of plank three inches wide, and long enough to mark four rows; place four wooden pins at distances equal to the distances you wish between the rows; then fasten two handles, one at each end about six feet long, so that the ends will be at convenient distances to hold, and then begin at one end of the field marking the course of the rows, and keeping all subsequent ones like the first, by letting the first tooth of the marker follow the outside row, thus completing three rows every time the operator crosses the piece. Thus it may be seen at a glance that an acre may be very expeditiously and uniformly marked, and easily followed by the planter.

This I believe to be the quickest, best, and cheapest way to plant beets, carrots, parsnips, broom corn, Indian corn, turnips, &c., ever tried. The planter is also the cheapest and best in my opinion of any made. C. C. Coeymans, N. Y., April, 1857.

WHEAT CROP IN ILLINOIS—CORN—GROWTH OF THE STATE, &c.—I wrote you on the 7th of April concerning the wheat crop in this state, and now after carefully watching its development from day to day, I am prepared to stand firmly by the opinion then expressed—namely: “that in Illinois the wheat crop of 1857 promises to exceed that of 1856, by twenty-five per cent.” The first opinion was based upon facts that were facts, and observations that were intelligent, and need not be repeated.

Since I wrote we have experienced some terrible weather, and the season is very backward, but the cold and wet have had a wonderfully beneficial influence on winter wheat, and since the first of this month a very great change has taken place in its appearance, and the croaking so rife a month since, has died away to the faintest echo. Most of the spring wheat sown having had the advantage of a sharp frost or two, immediately after sowing, is coming forward beautifully, and the generous rains of the last day or two is all that will be absolutely needed to secure the wheat crop in this part of the state.

Most farmers are now ready to plant Indian corn, but the ground is rather wet; however, a couple of weeks of favorable weather will enable them to finish this business. After the corn is once well up, one good soaking rain will insure this crop, so favourable is our deep, rich, mellow soil to the growth of Indian corn, and indeed every kind of grain, except perhaps oats: for this grain the soil is too rich. As paradoxical as it may appear, I believe there is no soil in the world that

will produce a crop with so little or so much rain, as the central portion of Illinois.

One process in the cultivation of Indian corn obtains here among our best farmers, which may be new to some of your readers. It is this. After the young corn is so far advanced out of the ground as to be clearly distinguishable in rows, the whole field is thoroughly harrowed. This operation levels down inequalities of surface, buries and kills the first crop of weeds, and leaves the young grain master of the field. It may be suggested that the harrowing that buries and kills the weeds, would bury and kill the springing grain, also, or at least disturb the integrity of the hills and symmetry of the rows, and leave the field in utter disorder. Such is not the case as shown by experience—in this, as in almost everything we have to learn, our best teacher.

Peach trees are not fairly in blossom, the prairies have only a faint tinge of green except in the sloughs, the timber of Big Grove and that which skirts the Salt Fork of the Vermillion and East Fork of the Sangamon scarcely show the freshening touch of spring, and the season is three weeks nearly, behind; but we have usually a fall to suit the spring, and compensation for everything.

There were 34,000 bushels of wheat forwarded from this station last year and 135,000 bushels corn, and good judges estimate the wheat to go forward this year will come up to 100,000 bushels, and corn 250,000 bushels, of the crop of 1857. The County assessor tells me there were in his opinion, more acres of prairie broken up last year in Champaign County, than the whole quantity previously under cultivation. These facts to measure the growth of Central Illinois by. B. F. J. West Urbana, Champaign Co., Illinois, May 14, 1857.

AMERICA vs. ENGLAND ON HORSES.—We are pleased to see that *Lecomte*, *Pryor* and *Priores*, the three gallant coursers which were sent from this country last fall, to confront the renowned champions of the English turf upon their own ground, and at their own terms, are entered for the great Goodwood cup! More than this, GILPATRICK—who rode *Lexington* in his famous race with *Lecomte*, and when he made the still more famous and never equalled time of four miles in 7:19½—and with him several other American jockeys, are to be present, so that the horses will be ridden in American style, and as they have been trained. The American horses are said to be in good condition, and we trust they may keep it until the eventful 29th of July. The following are the conditions of the race, according to *Ruff's Guide*, which will affect them:

The Goodwood Cup, value \$1,500, the surplus, if any, to be paid to the winner in money, a subscription of \$100 each, with \$500 added by the Racing Fund; two miles and a half; three year olds to carry 105 lbs.; four year olds 127 lbs.; five year olds 135 lbs.; six and aged 138 lbs.; mares allowed 4 lbs., geldings 7 lbs., horses, &c., got by Arabian, Turkish, or Persian stallions, or out of Arabian, Turkish, or Persian mares, allowed 18 lbs.; or if both, 36 lbs.; horses, &c., bred in America, or on the continent of Europe, allowed 14 lbs. The second horse receives \$500 out of the stakes, and the third \$250. The winner to pay \$50 to the Judge.

Under these conditions, *Lecomte* will carry 124 lbs., *Pryor* 121 lbs., and *Priores* 109 lbs.; four pounds being allowed to *Priores* as a mare. It will be seen therefore, that *Lecomte* and *Prior* will run at an advantage of 14 pounds less than English horses of the same age, and *Priores* 18 lbs. less.

NEW-YORK STATE FAIR GROUNDS.—The May meeting of the Executive Committee of the N. Y. State Ag. Society was held at Buffalo, when the grounds for holding the Fair were selected. The place chosen, comprising what is known as the Fort grounds and four adjoining blocks, is a very favorable one, located on the Niagara river, about a mile below the centre of the city.

Notes for the Month.

THE DEVONS AT "THE MEADOWS."—The friends of this excellent and serviceable breed should make no calculations this spring without reference to Mr. WAINWRIGHT'S catalogue. A notice of his sale, which is set down for June 17th, has appeared in our columns for some weeks past, and we intended before this to have mentioned, as they deserve, the inducements offered. We doubt if Mr. W.'s herd is excelled in America, and as this is his first public sale, he is enabled to present a rare collection from the best stock, both imported and of his own raising. His long experience and skillful breeding will meet, we confidently trust, the encouragement they, as well as the animals themselves, deserve, and believe that those engaged in raising or using North Devons, in all parts of the country, will find it also a matter of their own personal concern not to let the present opportunity escape them. The locality of Mr. W.'s place renders it easy of access, and it will be perceived that he invites the visits of parties interested, at any time.

FEVER AND AGUE PREVENTED BY PLANTS.—Lieut. Maury proposes to prevent intermittent fever, by purifying the air in sickly places of its miasm, by means of broad belts of large leaved plants, among which the sunflower is supposed to be especially efficacious. He thinks a belt of sunflowers, forty-five feet wide, around the Washington Observatory, preserved the men employed there from ague, while in other similar localities, not protected by a belt of sunflowers, the inhabitants suffered severely. We have a high respect for Lieut. Maury and greatly appreciate his scientific achievements, but we can hardly understand how a narrow belt of plants, is to strain the air of its poison, by simply passing over it. The air of a very gentle breeze moves six or seven feet in a second, and would pass over a belt of leaves a hundred feet wide in a few seconds; and it strikes us that a very small portion of a half mile of miasmatic air would ever touch the leaves in so brief a transit. The purifying power of vegetation is well known to chemists; but air cannot be cleansed by leaves unless it comes into actual contact with them, and even then the process is very slow, instead of being instantaneous. Laborious experiments for public benefit are eminently praiseworthy, but we cannot but think that success, if it results in this case, must be ascribed to some other influence than the absorbing power of the leaves.

THE INTERNATIONAL FAT CATTLE SHOW AT POISSY, FRANCE.—This show took place on the 6th, 7th, and 8th of April. The show-yard consisted of only a series of sheds, erected in the usual cattle market, and was open to all. The entries in the French department were 215 cattle; calves, 16; sheep, 20. In the English, the entries were—cattle, 64, and sheep, 24. There were six classes in all for English cattle, each comprising two heads for prizes—that is, for cattle not exceeding three years, and those above three years. In the first class for Short-Horns, the Duke of Beaufort took the prize of honor (a silver cup, value 2,500*fr.*), for the best beast in the show, for his Short-Horn ox under three years; Mr. Stratton taking the 2d prize with his four years and two months old ox. The Earl of Leicester and Mr. Heath took the prize in the class for Devons; while Mr. Heath took the 1st prize for Herefords, and Mr. Potter the second prize. The Scotch was by far the largest and the best, on the whole, of the British department. There were some splendid specimens of the polled breeds, Mr. McCombie taking a first prize with his four years five months old ox. There was a good show of West Highland, the Duke of Beaufort taking a prize with his four years seven months ox. The show of British sheep was not considered a favorable one. The principal breeders did not exhibit; there were, consequently, but few first-class pens. The

prize of honor, silver cup, value £40, was gained by Mrs. West, Bleckenton, Oxfordshire, for a pen of five Cotswolds. In the French cattle department the effect of crossing with the British breeds was apparent, a cross between a Short-Horn bull and a Breton cow gaining a first prize. Among the sheep also, the effect of crossing was shown in some fine specimens of Merinos crossed with Leicester. There was a large show of pigs, some of them exhibiting very superior qualities.

WM. H. LADD has sent us his Report as President of the Ohio State Board of Agriculture. We find the following facts and suggestions:—

—Too little attention is paid to grass in proportion to its value as a crop. More care and liberality in seeding, and a more generous supply of manure, especially in the way of top dressing the thinner parts of pasture lands, would double the present yield.

—To the introduction of superior blood and the greater care in breeding excited by shows and Ag papers, is ascribed the fact that while in 1855, the 624,746 horses in Ohio were valued at \$31,415,004, in 1856, 621,443—a number over 3000 less, were rated at \$36,231,127, or nearly five millions more.

—Like causes, plus the increased demand for meat provisions, have produced similar effects upon the cattle of Ohio, diminishing the number from 1,791,189, in 1855, valued at \$18,902,006, to 1,687,710 in '56, with the aggregate value of \$21,551,170.

—Taking two and three-fourth lbs. as the average per sheep, the wool clip of Ohio has fallen off from 13,624,069 lbs. in '54, to 9,662,626 in '56, or nearly four million lbs. in two years. This is accounted for in the report by the high prices, both of meat and bread stuffs, and increased facilities for transportation.

Messrs. L. Scott & Co. of New-York, have forwarded us a copy of "The Farmer's Guide to Scientific and Practical Agriculture; detailing the Labors of the Farmer in all their variety, and adapting them to the seasons of the year as they successively occur. By Henry Stephens, F. R. S. E., Author of the 'Book of the Farm,' etc., assisted by John P. Norton, late Professor of Scientific Agriculture in Yale College. In two volumes with numerous illustrations." The American publishers of this valuable work affix the following note:

"That portion of the Farmer's Guide written by Mr. Stephens, is a reprint of the second edition of the 'Book of the Farm.' The reader will see by Mr. Stephens' Preface, that the second edition is virtually a new book, embracing the more important features of the first edition, and all the later discoveries in Agricultural Science. This improvement in the character of the work, together with the additions of Prof. Norton, has induced the American Publishers to adopt a new title. The change is sanctioned by the British Publishers, who have an interest in the sale of the American Edition, and it meets the approbation of the American Public."

THE PREMIUM LIST of the N. Y. State Ag. Society with Regulations for the Fair at Buffalo, Oct. 6-9, is issued and may be had of the Secretary.

The Journal and Transactions of the Board of Agriculture of Upper Canada, have appeared, containing Mr. Lynch's Prize Report on the County of Simcoe.

MURRAIN IN CATTLE.—So prevalent has this disease become in some parts of the European continent, that an Order in Council has been published by the British government, prohibiting the importation of cattle, or of horns, hoofs, hides or skins, from those territories of Russia, Prussia or Mecklenburgh Schwerin, which lie on the Gulf of Finland, or between the Gulf and the city of Lubeck. It is hoped in this way to exclude this serious malady, among the effects of which are not only feared its ravages for a season, but also the permanent deterioration of breeds. The governments of France, Prussia, and some of the smaller German states, had already made regulations for the

exclusion of the tainted cattle or any part of their carcasses. The British papers are also advising increased attention to stock, to keep it in a healthy state, and render it less liable to infection; it being thought likely that lack of proper food, ventilation and cleanliness, would have a tendency to encourage the dreaded epidemic.

Mr. C. S. WAINWRIGHT'S Catalogue of Devons to be sold at "The Meadows" June 17, includes 11 head of females and 10 of bulls, the latter including "May Boy," taker of several important prizes, and a first class animal.

MORE SALES. — Mr. WELTON MARKS of Camillus, Onondaga Co., N. Y., has just purchased from Dr. HERMAN WENDELL of this city, the following: *Cows*—Daisy 4th, by imported Wildame bull Prince, 841 A. H. B.—Daisy 6th, by imported Duke of Wellington, (3654)—Daisy 7th, by Duke, 441. *Heifers*—Lady Ware, Dairy, Duchess and Sally Randolph, all by imported Lord Ducie (13181,) by whom the three cows are in calf. In a note furnishing the above facts, Dr. WENDELL says—"My herd is yet quite extensive, being made up entirely of imported animals and their get—all *Bates*. My two last imported cows brought me noble calves, both by Gen. Canrobert (12926,) whose sire is Grand Duke (10284,) and whose dam is by 4th Duke of York, 10167.) One of the calves is a bull, a roan—I call him Duke of Portland—the other a red and white heifer—I call her Duchess of Cleveland."

Dr. JAS. W. WILKIE of Auburn, has purchased the thorough-bred Durham bull "La Grange," bred by Col. J. M. SHERWOOD. He is intended for his father's estate in Manlius, Onon. Co. As a getter of fine milkers, he has no equal. La Grange, bred by Col. Sherwood, calved 13th July, 1851, in color, roan—got by 3d Duke of Cambridge—dam, La Polka by Pontousic—Ladie by Arrow (A. H. B. 11)—Lois by Archer (E. H. B. 3025)—Lily by Wendell, E. H. B. 5667)—Netherby by Monarch (4494)—Sweetbriar by Barrupton (54)—Roseling by Western Comet (689)—by Comet (155)—by Son of Favorite (253)—by Cupid (177)—by Favorite (252.) Pontousic, bred by Col. Sherwood, was got by Symmetry—Dam, Philopœna by Archer, &c.

UNITED STATES AG. SOCIETY.—At a recent meeting of the Implement Committee of this body in New-York, arrangements for a general trial of Implements at the Louisville Fair next fall, were completed, and it was decided to have a Summer trial of Reapers and Mowers, in the western part of this State, if a locality and time can be found satisfactory to all concerned, or if this should appear impracticable, Delaware was named as the next best State. E. Holmes of Ohio, well known as an accomplished and reliable mechanician, has been engaged to superintend the two trials, and secure the thorough and equitable examination of all competing machines. It is stated that—

The Society have decided to offer a Grand Gold Medal of Honor for articles of the greatest importance to the farmer: one for the machine which shall, in the most thorough manner and with the greatest saving of time and labor, accomplish the disintegration of the soil—performing the labor of the plow; another for the best motive power for farm use; another for the most important invention relating to agriculture, patented within the last two years. This Grand Medal will be superior to anything heretofore made in this country, and, as it will only be awarded after the strictest examination and most careful deliberation, it will be a prize worth seeking.

A Grand Gold Medal, valued at \$175, will be awarded to the successful machines at the Reaper and Mower trial. H. S. Olcott, Secretary of the committee, will forward a list of regulations and premiums to applicants. His address is American Institute, New-York City.

SHADE TREES IN PASTURES.—J. O. B. RENICK of Columbus, O., and who is we believe an extensive grazier, supports the views promulgated by our correspondent, Hon. A. B. DICKINSON, about the injurious effects of shade trees in pastures. In a letter to the

Ohio Farmer, Mr. R. says—"You recommend graziers, if they have no shade trees in their pastures, to make a way to the woods for their cattle. My observation and experience convince me the less shade the better, and I would refer you to Mr. DICKINSON, Hornby, New-York, who has been the most scientific grazier I ever knew; he has experimented thoroughly, and will tell you if you wish to fat your cattle, cut down any shade tree. All admit that shaded pastures will not fatten fast, and if your shade is in groves, the cattle will assemble, hook each other about, and will not leave until hunger drives them out, and your cattle are more liable to bunch and rear; where, if there is no shade trees, they will lie down scattered as soon as they have filled themselves. They get a free circulation of air, and not so liable to foot-evil or disease. Cattle are more healthy raised on a prairie, than in a timber country."

ANNOUNCEMENT IN RELATION TO THE U. S. AG. SOCIETY'S TRIAL OF IMPLEMENTS.—Most of our readers have doubtless seen a circular put forth a month or two since by the *Committee of Arrangements* of the United States Ag. Society, upon the subject of the proposed trial of Implements at Louisville. They will also remember a notice in our paper of April 23d, of a recent meeting of this committee, mentioning their action in relation to a proposed test of Reapers, and specifying some of the premiums to be offered for them and other implements. The last number of the *Boston Cultivator*, in referring to the latter, has the following announcement, which is of some importance to any parties feeling an interest in the matter, or who may intend to become exhibitors:—

"It will be recollected that we have already published a circular in reference to this trial, from the 'Committee on Implements and Machinery of the U. S. Ag. Society.' To correct misapprehensions, we are authorized by the President of the Society to state that the persons whose names are attached to that circular, are only a committee to make the arrangements for the trial—that the committee to make the examinations and awards has not yet been appointed, but that it is intended to select for that place men of the highest capability in reference to the matters on which they will be called to act, and that their names will be announced in due season."

R. C. M., *Washington Hollow*. Your notice of a remedy for heaves, &c., is very proper for an advertisement, but not as a communication.

LARGE PIG AND LARGE RUTA BAGAS.—I notice several statements in the *Cultivator* of large hogs, turnips, &c. HAZEN HAZELTINE, of this village, killed, on the 16th day of December last, a pig exactly eight months old, which weighed 406 lbs. Fed twice a day on "slops" and milk, with the meal of corn and peas, and oats added, and once with corn on the cob.

In the summer of 1844, we fenced off a piece of sward, and yarded the cows upon it till July 20th, then plowed it, and yarded them on it the remainder of the season. In the following spring sowed ruta bagas after another plowing and harrowing. We had over 1400 bushels to the acre, and there were 25 bushels out of which no two turnips could be selected that would lie in a bushel basket,—one so nearly filling it that a second would roll to one side and turn the basket over. Many of them weighed fifteen pounds each, and one of them went up to seventeen and a half pounds. I well remember having to carry a few of them through the door, as the cellar window was too small to admit them. J. W. BOYNTON. *Halley, C. E.*

POULTRY MANURE.—At a recent meeting of the Skaneateles Farmer's Club, Mr. C. Moses stated that he considered the droppings of poultry to be equal in value to the food the fowls ate. He made it into a compost—one-third ashes or plaster, and two-thirds hen manure, using 25 bushels to the acre—a handful to a hill of corn. This agrees with the opinion sometime since expressed by one of our correspondents.

By an oversight in "making up," the last paragraph of the article on page 182 of this number, headed "Root Crops—Humbugs, &c.," was omitted, together with the name of the writer, Mr. W. J. PETTEE, of Connecticut. His advice may be received with greater weight if we add the fact that he was last season awarded the first prize by the Conn. State Ag. Society, on Farms of less than 100 acres. He attributes this success solely to the growth of root crops as described in his communication.

WEIGHT OF GRAIN.—By a law passed by the Legislature of the State of New-York, April 16, 1857, it is enacted that a bushel of

Indian Corn shall weigh,	58 lbs.
Wheat	60 "
Beans	62 "
Peas	60 "
Clover seed	60 "
Potatoes	60 "
Rye	56 "
Flax seed	55 "
Barley	48 "
Buckwheat	48 "
Timothy seed,	44 "
Oats	32 "

SALE OF AYRSHIRE CATTLE.—We invite attention to the public sale of fifty head of Ayrshires, by ROBERT GRAY of Frederickton, N. B. A letter from our correspondent at St. John, N. B., says—"The stock to be sold is very choice, the breeder having emigrated from Ayrshire seven years ago with a stock of pure bred cattle, selected from the best dairies there, and he has succeeded in keeping them up to the mark. The bulls he has, are directly descended from "Jock the Laird," an animal which sold for £300 sterling. There are two steamers a week from Boston and Portland to St. John, and steamers every morning and evening from St. John to Frederickton."

MORE CATTLE COMING.—We learn that THOS. RICHARDSON, Esq., of West Farms, Westchester Co., N. Y., has recently purchased a superior Short-Horn bull got by Mr. Boothe's "Hopewell," and three heifers also of Boothe blood, which are soon to arrive at New-York.

Mr. H. AMBLER's celebrated herd of Short-Horns, Halifax, England, were sold at auction the first week in April. Fifty animals were sold, averaging \$420 per head. The bull "Grand Turk," was bought by the Illinois Company for \$1,500. The same company also bought the cow "Western Lady," for \$875; and the next day, at the sale of the herd of the Rev. T. Cater, consisting of about 60 head, the same company bought two heifers at \$450 and \$290.

DEVON HERD BOOK.—SANFORD HOWARD, Esq., editor Boston Cultivator, gives notice that the third volume of the Devon Herd Book, which he has been engaged in preparing, will be ready for delivery in July next.

HAY PRESSES.

DERICK'S CELEBRATED PARALLEL LEVER Portable and Stationary HAY PRESSES, patented May 16th and June 6th, 1854—which (at about the same cost of transportation as a Railroad Horse Power and Thresher,) are now being forwarded to all parts of the country, and are in every case giving the most decided satisfaction; which (with two men and a horse) are warranted to bale from six to nine tons of hay per day, according to the No. or size of the press—and which are sold for from \$100 to 175. For circulars, with full explanatory engravings, and numerous first-class references, apply personally or by mail to **WILLIAM DEERING & CO.** Dec. 11—wew&mtf Manufacturers, Albany, N. Y.

Please to Read This.

IF YOU WANT EMPLOYMENT, send at once for Mr. SEARS' CIRCULARS TO BOOK AGENTS. Our publications are considered among the most saleable. Address (post-paid) **ROBERT SEARS, Publisher,** March 19—w6fmet No. 181 William-st., New-York.

SECOND GREAT SALE

Of pure-bred AYRSHIRE STOCK, at Oak Park, near Frederickton, New-Brunswick, on Thursday, 25th June, at 11 o'clock forenoon.

THE subscriber will sell by auction, Fifty head of his surplus stock of pure-bred Ayrshire cattle, comprising

- 1 four year old Bull,
- 3 two year old Bulls,
- 8 one year old Bulls,
- 10 three year old Cows,
- 10 two year old Heifers,
- 10 one year old Heifers,

and a few Bull and heifer calves. The above are warranted to have been bred by the subscriber from stock selected and imported by himself from Ayrshire.

ROBERT GRAY.
May 21—w5tm1t. Oak Park, Frederickton, N. B.

C. S. WAINWRIGHT'S

First Public Sale of Thorough-bred North Devon Cattle, to be held at "THE MEADOWS" on the 17th day of June, 1857.

THE subscriber intends holding his first Public Auction of North Devon Cattle on the above-named day, at his residence, "The Meadows," four miles north of Rhinebeck Station on the Hudson River R. R. The animals to be sold will number between 20 and 25 head, males and females, from calves to full grown; all of which have been either bred or imported by himself, and have perfect herd-book pedigrees. As a lot, he believes he may say with truth, they are fully equal to any ever yet offered to the farmers of the U. S. Among the number will be the imported bull May-Boy, (71,) and the imported cows Nonpareille, (924,) and Moss-Rose (904.)

Catalogues containing full pedigrees and all necessary information, will be ready on the 15th of April, and will be sent to all desiring it. The subscriber will be happy to have gentlemen visit his herd at any time.

ALL the sales will be BONA FIDE; and no animal on the Catalogue will be DISPOSED OF UNTIL THE AUCTION.

C. S. WAINWRIGHT.
Ap. 9—w10tm2t "The Meadows," near Rhinebeck, N. Y.

Chinese Sugar Cane.

500 POUNDS pure seed, finest quality, for sale at 75 cents per lb., or 100 lbs. for \$60.

W. R. PRINCE & CO.,
May 7—w1tm1t* Flushing, N. Y.

SUGAR CANE. CHINESE NORTHERN SUGAR CANE. —A large supply of Seed of the very best and PUREST quality just received, and for sale at the NEW-YORK AGRICULTURAL WAREHOUSE and SEED STORE. It can be had by the quantity, or for \$2 Seed enough will be sent by mail, POST-PAID, to thoroughly plant an acre, with directions for planting and cultivating accompanying each package.

R. L. ALLEN,
April 9—w2tm2t* 189 Water-st., New-York,

Pure Chinese Sugar Cane Seed.

THE subscriber is prepared to supply orders for this Seed, warranted pure, at 75 cts. per pound.

GEO. G. SHEPPARD, Horticultural and Seed Agency, 159 Front Street, New-York.
April 30—w2tm1t.

PERUVIAN GUANO, Superphosphate of Lime, &c.

THE best quality of Peruvian Guano, with Government weight and brand on each bag, by the cargo or in smaller quantities, at the LOWEST PRICE.

SUPERPHOSPHATE OF LIME.—Being agent of the largest manufacturers, I can supply a first-rate article at the lowest manufacturer's prices.

BONE-DUST—Coarse and fine ground—also sawings and filings.

POUDRETTE and **TAFEU** by the barrel.

My warehouse is the LARGEST depot in the United States for the various kinds of FERTILIZERS, all of which are guaranteed of the best and most reliable quality.

AGRICULTURAL AND HORTICULTURAL IMPLEMENTS, FIELD AND GARDEN SEEDS, A large and complete assortment of all the improved kinds.

MOWING AND REAPING Machines.
R. L. ALLEN,
Feb. 26—wew&mtf 189 & 191 Water-st., New-York.



Excelsior Ag. Works, Albany, N. Y.

RICH'D H. PEASE, Proprietor.

WE OFFER the farmers and other responsible persons of this country, a rare chance to make money as fast as they can in most any other way, by selling our Celebrated Excelsior Patent Railway Endless Horse Powers, Threshers, Cider Mills, Saw Mills, &c., &c., for which we will allow them a liberal commission. Last season many farmers sold these machines for us, and they all made money, and are anxious to sell them again this season. All communications addressed to the subscriber will be promptly answered.

RICH'D H. PEASE.

CERTIFICATES.

BEDFORD Co. Tenn. Oct. 15, 1856.

We the undersigned hereby certify that we have purchased of the Agent of the Manufacturer, Richard H. Pease of Albany, New-York, his "Excelsior Horse Power and Thresher," and having used them a sufficient length of time to convince us of their utility and durability, feel no hesitancy in saying that in our opinion they are the very best of which we have any knowledge, they having performed to our entire satisfaction. Given under our hand day and date above.

GARRET PHILLIPS,
M. L. DISMUKES,
THOS. LIFSCOMB,
WM. A. ALLEN,
J. T. ARNOLD,
W. W. HASTINGS,
JAMES MULLINS,

BENJ. GARRETT,
ALEX. SANDERS,
WM. M. GOGGIN,
ALEX. EAKIN,
REDDING GEORGE,
J. J. KOONCE,
W. C. J. BROWN,

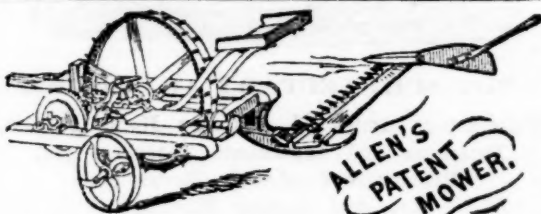
H. D. DAVIDSON.

EAST GREENWICH, N. Y., Feb. 25, 1857.

MR. R. H. PEASE—I received the Two Horse Power, Thresher and Separator I purchased of you, and put it to work to test it. I have threshed 2,500 bushels of wheat, oats and rye with them, without a break of any kind. It works to my entire satisfaction, and I think there is no better machine made.

WE. MCNEIL.

May 14—w&mtf.



The Best Mowing Machine in the World.

ALLEN'S

PATENT IMPROVED,

MOWING MACHINE,

AND COMBINED MOWER AND REAPER;

STRONG, simple in construction, not liable to get out of order, compact, light, easy of draft, perfectly safe to the driver, and may be worked at a slow gait by Horses or Oxen. No clogging of knives; works well on rough ground, also on side-hills, salt and fresh meadows, and in any kind of lodged grass and clover.

Warranted to Give Entire Satisfaction.

Manufactured at the Agricultural Implement Manufactory, and for sale at the Warehouse and Seedstore of

R. L. ALLEN, 189 & 191 Water Street,
April 30—w9tm2t. New-York.

Agricultural Books,

For sale at the office of the Country Gentleman.

A New and Improved Style of Barometer.

Farmers Save Your Crops?

I AM now manufacturing Barometers expressly intended for the use of the farmer. To the mariner the Barometer has always been considered indispensable—it has saved thousands of lives by its almost unerring indications of approaching tempests. The only reasons why FARMERS have not generally availed themselves of the benefits of this instrument have been; 1st. The great cost of reliable instruments; 2d. The extreme liability of its destruction by transportation, and 3d. The prevailing opinion that none but the learned and experienced can understand its indications.

All these objections are now completely removed.

After much reflection and experience I have adopted a method of construction so as to ensure complete accuracy and durability, and which enables me to send them by express to any part of the country without the slightest injury, and with scarcely a chance of damage. These instruments are put up in handsome style, in polished black walnut cases. They are about three feet long, and make a handsome piece of furniture.

Price Only Five Dollars.

To every purchaser is furnished a pamphlet entitled the History and use of the Barometer, giving in addition to a complete history of the instrument, the fullest instructions for its use, and for predicting changes in the weather.

This pamphlet contains rules and suggestions never before published, and which are the result of my experience as a practical meteorologist. Price of pamphlets 10 cents. Any one who can read can understand it. My Barometers were awarded

A FIRST CLASS SILVER MEDAL

At the last Michigan State Fair. They have, moreover, been fully tested for more than a year by farmers in different parts of the country, and purchasers are continually expressing to me their unbounded satisfaction from the utility of their instruments, which have in many cases saved their owners more than ten times their cost in a single season! Not a single purchaser can be found who is dissatisfied, or who would be willing to part with his instrument. The strongest certificates and recommendations could be added, were it necessary. The instruments will last, with proper care, for any length of time. I also manufacture Standard Barometers furnished with Thermometers, Vernier scale and ivory point cistern, put up in mahogany cases, with large glass door at top. Price \$15, or only half the price of the Standard Barometers of other makers, while it is handsomer and more durable than any other now made. All orders promptly attended to. The safest way of remitting money is by draft. All letters requiring an answer should enclose a stamp for return postage.

Address
April 30—m2tweow4t.

L. WOODRUFF,
Ann Arbor, Mich.

The Muscadine Grape, A NEW AND CHOICE VARIETY.

A SHAKER SEEDLING.

THIS early, excellent grape ripens early in September, nearly a month earlier than the Isabella. It is perfectly hardy for the Northern climate, a sure and constant bearer, not subject to mildew, and the fruit is delicious and high flavored, having no unpleasant pulp, and has been pronounced by competent judges superior to the famed Isabella or Catawba, either as a wine or table grape. Confidently recommending it to the public, and believing that all who try it will find it THE VERY GRAPE they want, we offer the public the roots at prices varying from \$1 to \$3, according to age and size.

Address
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Albany, N. Y.

April 9—w4tm2t

FOR SALE

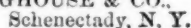
NO. 1 Peruvian Guano,
No. 1 Manipulated Guano,
Superphosphate of Lime,
Bone—fine and coarse,
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R. NUTTING.

May 14—wewow3t—mlt.

Choice Farm Lands for Sale.**THE ILLINOIS CENTRAL R. R. COMPANY,**

IS NOW PREPARED TO SELL ABOUT

1,500,000 ACRES**OF CHOICE FARMING LANDS,****In Tracts of 40 Acres and upwards, on Long Credits and at Low Rates of Interest.**

THESE Lands were granted by the Government to aid in the construction of this Road, and are among the richest and most fertile in the world. They extend from north-east and north-west, through the middle of the State, to the extreme south, and include every variety of climate and productions found between those parallels of latitude. The northern portion is chiefly prairie, interspersed with fine groves, and in the middle and southern sections timber predominates, alternating with beautiful prairies and openings.

The climate is more healthy, mild and equable, than any other part of the country—the air is pure and bracing, while living streams and springs of excellent water abound.

Bituminous Coal is extensively mined, and supplies a cheap and desirable fuel, being furnished at many points at \$2 to \$4 per ton—and wood can be had at the same rate per cord.

Building Stone of excellent quality also abounds, which can be procured for little more than the expense of transportation.

The great fertility of these lands, which are a black rich mould from two to five feet deep, and gently rolling,—their contiguity to this Road, by which every facility is furnished for travel and transportation, to the principal markets North, South, East, West, and the economy with which they can be cultivated, render them the most valuable investment that can be found; and present the most favorable opportunity for persons of industrious habits and small means to acquire a comfortable independence in a few years.

Chicago is now the greatest grain market in the world—and the facility and economy with which the products of these lands can be transported to that market, make them much more profitable at the prices asked, than those more remote at government rates,—as the additional cost of transportation is a perpetual tax on the latter, which must be borne by the producer, in the reduced price he receives for his grain, &c.

The Title is perfect—and when the final payments are made, Deeds are executed by the Trustees appointed by the State, and in whom the title is vested, to the purchasers, which convey to them absolute titles in Fee Simple, free and clear of every incumbrance, lien or mortgage.

The Prices are from \$6 to \$30—Interest only 3 pr. ct. Twenty per cent. will be deducted from the Credit Price for Cash.

Those who purchase on long credit, give notes payable in 2, 3, 4, 5 and 6 years after date, and are required to improve one-tenth annually for five years, so as to have one-half the land under cultivation, at the end of that time.

Competent Surveyors will accompany those who wish to examine these Lands, free of charge, and aid them in making selections.

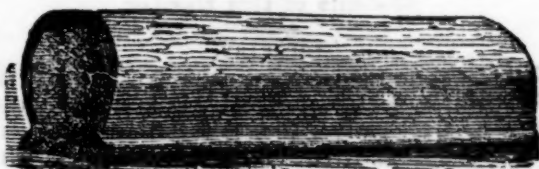
The lands remaining unsold are as rich and valuable as those which have been disposed of.

SECTIONAL MAPS

Will be sent to any one who will enclose fifty cents in Postage Stamps, and Books or Pamphlets, containing numerous instances of successful farming, signed by respectable and well-known farmers living in the neighborhood of the Railroad Lands, throughout the State—also the cost of fencing, price of cattle, expense of harvesting, threshing, etc.—or any other information—will be cheerfully given on application, either personally or by letter, in English, French or German, addressed to

JOHN WILSON,

Land Commissioner of the Ill. Central R. R. Co.
Office in Illinois Central Railroad Depot, Chicago Ill.
April 9—w&m6m

**Appleton's Drain Tile Works,**

Corner of Lydius and Snipe streets, Albany, near Mr. Willson's Nursery.

HORSE SHOE TILE 14 INCHES LONG.

Prices—4½ inches calibre, \$18 per 1000 pieces—3½ inch, \$15 per 1000—2½ inches, \$12 per 1000.

SOLE TILE 14 INCHES LONG.

4 inches calibre, \$40 per 1000—3 inches, \$18 per 1000—2 inches, \$12 per 1000.

THE subscriber having enlarged his works, is now prepared to furnish Drain Tile of the various patterns and prices. Also large Tile for small streams and drains about dwellings, &c., at \$4 \$6, and \$8 per 100 pieces. He warrants his Tile to be perfectly sound, and to fit good at the joints, so as to admit water and keep out the dirt. The Tile have a larger calibre than any other of American manufacture for the same prices; they are also more than 14 inches in length—1000 pieces will lay 72 rods.

Tile delivered at the docks and railroads free of cartage. Specimens can be seen at L. & M. Merchants', 71 Quay-st., Albany, near the Steamboat Landing.

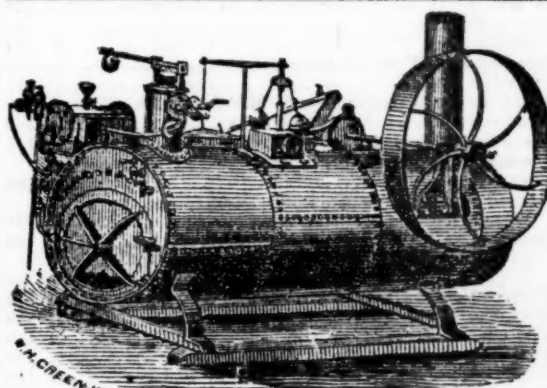
Full directions for laying Tile will be sent free to those addressing the subscriber.

He would only add that Tile from his establishment obtained the first prizes at the Albany county and N. Y. State Fairs. Practical drainers furnished if required.

Orders from all parts will be thankfully received and promptly attended to. Address JOHN APPLETON.

195 Washington-st., Albany, N. Y.

March 26—wewow8tm3m.



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Practical Machinists, and Builders of their Celebrated PORTABLE STEAM ENGINES

For Farm and Mechanical Purposes.

WE HAVE made great improvements in our Engines the past winter, particularly in the manner of setting the tubes in the boilers, (by Prosser's Patent) adding a large wrought-iron dome in place of small cast ones, increased the size of fire-box, with ash-pan that can be closed up tight or opened at pleasure,—also in the manner of connecting the governor to throttle, making it direct action.

Parties wishing Circulars with cuts of Engine, should enclose P. O. Stamp to pay return postage on same. The following is our

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Horse estimate	space oc-	cash price	fly-wheel di-	face of
power weight	cupied		ameter	wheel
2½ 2000 lb.	4 by 5 ft.	\$240	39 in.	5½ in.
3 2200 "	5 by 5 "	290	39 "	5½ "
4 2500 "	7 by 5 "	355	40 "	6 "
6 3600 "	7 by 5 "	550	44 "	7 "
8 4800 "	9 by 6½ "	700	48 "	8 "
10 6000 "	10 by 6½ "	875	60 "	8 "
12 7500 "	14 by 6½ "	1050	72 "	12 "

The above price includes boxing and delivered on board cars.

A. N. WOOD & CO.

April 23—wtf—June 1—mtf.

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COLUMBIAN GUANO,
PERUVIAN GUANO, Government Brand and Weight.
 Superphosphate of Lime.
 Bone Dust.

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